DOCUMENT RESUME

ED 231 384 IR 050 294

| | |
|---|---|
| AUTHOR | Anderson, Rosemary; And Others |
| TITLE | Library of Congress Online Public Catalog Users Survey. |
| INSTITUTION | Library of Congress, Washington, D.C. |
| SPONS AGENCY | Council on Library Resources, Inc., Washington, D.C. |
| PUB DATE | Oct 82 |
| NOTE | 101p.; For related document, see IR 050 349. |
| PUB TYPE | Reports - Research/Technical (143) -- Tests/Evaluation Instruments (160) |
| EDRS PRICE | MF01/PC05 Plus Postage. |
| DESCRIPTORS | *Attitudes; Information Needs; Interviews; Library Automation; *Library Catalogs; Man Machine Systems; *Online Systems; Questionnaires; Search Strategies; *User Satisfaction (Information); *Use Studies |
| IDENTIFIERS | Library of Congress; *Library Users; *Online Catalogs |

ABSTRACT

The current attitudes of users and non-users towards public online computer catalogs (OPAC's) were studied at the Library of Congress (LC) and responses were compared with those from an aggregate survey. Attitudes of both users and non-users toward the LC OPAC system were favorable. Problems experienced by patrons related to difficulty in remembering what the catalog includes, infrequent use requiring relearning of the system, and difficulty finding effective subject terms. Study-based recommendations include continued HELP facility development; loading of revised error messages into the system; unifying the command structure of the systems; adaptation of the Congressional Research Service's PLATO-based tutorial system for public use, development of online prompts, incorporation of records for older materials and periodicals into the catalog, and inclusion of location information in the records. To alleviate subject-searching difficulties, recommendations include placing subject authorities online with extensive scope notes; loading Dewey and LC Classification Tables online and connecting the table with the bibliographic records; and enriching the subject record by including the table of contents, index, and abstract. (Author/LMM)

**********
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
**********

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)
This document has been reproduced as received from the person or organization originating it.
Minor changes have been made to improve reproduction quality.
Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

ED231384

# LIBRARY OF CONGRESS

# ONLINE PUBLIC CATALOG USERS SURVEY:

# A REPORT TO THE COUNCIL ON LIBRARY RESOURCES

By

Rosemary Anderson
Victoria A. Reich
Pamela Roper Wagner
Robert Zich

Office of Planning and Development

Library of Congress

October 29, 1982

IR050294

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Robert Zich

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

ACKNOWLEDGEMENTS

The staff of the Office of Planning and Development would like to express our appreciation to the following: LC's Survey Review Group (Henriette Avram, Network Development Office; Pam Bacher, Automated Systems Office; Jeff Griffith, Congressional Research Service; Sarah Pritchard, General Reading Rooms Division, and Elizabeth Stroup, General Reference), the staff of the General Reading Rooms Division for their patience and support, and C. Lee Jones and the other principal survey participants (Douglas Ferguson of RLG, Neal Kaske and Karen Markey of OCLC, Gary Lawrence of UCDA, and Joe Matthews) for their assistance, cooperation and guidance.

## ABSTRACT

The Library of Congress participated in a national survey sponsored by the Council on Library Resources to study the current attitudes of users and non-users towards public online computer catalogs. Responses of users and non-users at LC were compared with the responses of the aggregate users and non-users surveyed. The great majority of Library of Congress users of the online catalog think the computer catalog is as good as or better than the card catalog; most non-users also have a favorable attitude towards the system. Most online searching is by subject (68%), followed by specific title (38%), and specific author (21%) searches. Library of Congress patrons experience some problems using the system, such as difficulty remembering what the computer catalog includes, the necessity of "relearning" the system when used irregularly, and difficulty finding the "correct" subject terms for successful bibliographic retrieval. LC users express the desire for wider bibliographic coverage (dissertations--44%, journals--43%, older books--39%, newspapers--37%), book location information, and some sort of online instruction. The Planning Office is making the following general recommendations for the improvement of the LC online catalog: continued development of the HELP facility; loading of revised error messages into the system; continued work on unifying the command structures of LC's two bibliographic retrieval systems; adaptation of CRS's Plato-based tutorial system for public use; development of online prompts; incorporation of records for older materials and periodicals into the online catalog; and inclusion of location information in the records. To alleviate some of the difficulties of subject searching, the Planning Office recommends that LC and the library community work to place subject authorities online and include in the authorities extensive scope notes; load Dewey and LC Classification Tables online and connect the tables with the bibliographic records; and if feasible, enrich the subject record by including in the record the Table of Contents, index, and abstract of the item.

## SUMMARY

The Library of Congress participated in a national survey sponsored by the Council of Library Resources to study the current attitudes of users and non-users towards the public online computer catalogs. We report here the results of the LC survey and compare this data with the national aggregate data. This report also identifies specific problems encountered by LC patrons in using the Library's online retrieval systems and recommends corrections for these problems.

Library of Congress users have free access to two online files. The Library of Congress Computerized Catalog (LCCC), the more heavily used file, allows searches of the MARC monographics data base by author, title, LC subject heading, class number and card number. LCCC is accessed through the SCORPIO (Subject-Content-Oriented Retriever for Processing Information Online) retrieval system. The entire MARC file (books, serials, maps) may be accessed through the Library's MUMS (Multiple Use MARC System) retrieval system. MUMS allows component word (free text) searching of the author, title, note and tracing fields in the MARC records.

Because SCORPIO and MUMS have different sign-ons, file coverage, commands, subcommands, displays and sign-offs, the online catalog has caused some user confusion. To more clearly define the problem areas, the Library decided to survey online catalog users. Concurrently, the Council on Library Resources was orchestrating a nationwide multilibrary survey intended to reveal the present state of development of online catalogs and to further cooperation among those who have developed or are developing online catalogs. The Library of Congress joined this effort in early 1981.

With the aid of Research Libraries Group, LC staff conducted a preliminary survey of patrons, and interviewed users and non-users alike. In the fall of 1981, the survey pre-test was administered, and the results were sent to the University of California Division of Automation (UCDA) for analysis. UCDA then revised the questionnaires into their final form, and prepared a final sampling plan. In April and May of 1982, LC staff approached every appropriate patron and received completed questionnaires from 557 users and 300 non-users, which were sent to UCDA for analysis. Also in May, a series of focus group interviews were conducted by OCLC staff at the Library. Final results from the study arrived in early September.

The data show that the great majority (95%) of LC users of the online catalog think that the computer catalog is as good as or better than the card catalog. Most non-users also respond favorably to the system. A comparison of the responses of users and non-users at LC with those of the aggregate users and non-users surveyed reveals that LC patrons in general appear to rely more on the catalog -- both online and card -- than the aggregate patrons. Online searching is more frequently done by subject (68%), followed by specific title (38%) and specific author (21%) searches. LC patrons experience some problems using the system, such as difficulty remembering what the computer catalog includes, the necessity of "relearning" the system when used irregularly, and difficulty finding the "correct" subject terms for successful bibliographic retrieval. LC users express the desire for wider bibliographic coverage (dissertations--44%, articles from journals--43%, older books--39%, newspapers--37%), book location information, and some sort of online instruction such as system tutorials or "suggestive prompting."

The Library of Congress Planning Office is making the following general recommendations for the improvement of the online catalog: continued development of the HELP facility; loading of revised error messages into the system; continued work on unifying the command structures of LC's two bibliographic retrieval systems; adaptation of Congressional Research Service's PLATO-based tutorial system for public use; development and incorporation of an online system of "suggestive prompts"; incorporation of records for older materials and periodicals into the online catalog; and inclusion of location information in the bibliographic record.

The Planning Office also recommends that LC and the library community work together to alleviate some of the difficulties of subject searching by: placing subject authorities online and including in the authorities extensive scope notes; loading Dewey and LC Classification Tables online and connecting the tables with the bibliographic records; and, if feasible, enriching the subject record by including in the record a Table of Contents, index, and abstract of the item.

Several projects have been completed which help remedy problems identified by the survey. These changes and those that flow from implementation of the recommendations of this report should significantly aid the Library of Congress in providing the flexible, state-of-the-art bibliographic retrieval system for which it strives.

TABLE OF CONTENTS

INTRODUCTION . . . . . 1

BACKGROUND . . . . . 1-5

METHODOLOGY. . . . . 5-7

SUMMARY OF RESULTS . . . . . 7-13

RECOMMENDATIONS. . . . . 14-16

CONCLUSION . . . . . 17

APPENDICES

APPENDIX 1: Library of Congress SCORPIO User Survey 1979

APPENDIX 2: SCORPIO: A Study of Public Users of the Library of Congress Information System

APPENDIX 3: Questions LC Might Wish Answered in an Online Catalog User Survey

APPENDIX 4: Terminal Use Interview Questionnaire

APPENDIX 5: Card Catalog Use Interview Questionnaire

APPENDIX 6: Pre-Test Time Schedule Sheet

APPENDIX 7: Schedule of Data Collection: April 5 - May 30, 1982

APPENDIX 8: LC Focused Group Interviews Draft Schedule

APPENDIX 9: Council on Library Resources Computer Catalog Study Questionnaires

## INTRODUCTION

Online retrieval of information is becoming increasingly common in libraries. Because this technology is new, compared with print, its use must be monitored to be sure library patrons are not hampered by the new online systems. During the past two years, the Council on Library Resources has sponsored a nationwide survey of online computer catalogs. Thirty libraries canvassed patrons who were either users or non-users of the libraries' online retrieval systems. The Library of Congress was a survey site. We report here the results of the Library of Congress survey and compare this data with the national aggregate data. We also report specific problems encountered by LC patrons in using the Library's online retrieval systems and recommend corrections to these problems.

## BACKGROUND

### The SCORPIO system

The Library's SCORPIO system (Subject-Content-Oriented Retriever for Processing Information Online) dates from the late 1960's, when the Library's Congressional Research Service (CRS) began developing an online information retrieval system furnishing legislative and bibliographic data. The structure of the SCORPIO/Logic Library System is technically based on work which originated in the middle 1960's at Lockheed under sponsorship of the National Aeronautics and Space Administration under the names "Dialog" and "Recon." The full SCORPIO programs, created by the Library's Information Systems Office (now the Automated Systems Office, ASO), were in use in a few

Congressional offices by 1974. In April, 1975, the first computer terminal for public use was installed in the Science Reading Room. Without any special announcements or training, the system was set up to test software, hardware, and public acceptance.

SCORPIO evolved based on feedback from this successful experiment and from LC and Congressional staff, and in May 1977, the Computer Catalog Center (CCC) was opened adjacent to the Main Reading Room giving LC readers online access to all MARC records (i.e., the online catalog) and certain other files. Located in the CCC were six Sycor CRT terminals, two with Tally local printers attached. Brief printed instructions were available, and a reference librarian was on duty to assist users with the system. There are currently a total of 24 terminals and 16 printers for public use in the Main Reading Room area, and many other public terminals scattered throughout other reading rooms. The Library's computer systems support over 2000 terminals for reference, processing, and administrative use (including terminals in Congressional offices).

"SCORPIO" refers to a retrieval language with consistent command and display techniques across the different files of the Library of Congress Information System (LOCIS). Access points include authors, other personal names, titles, corporate names, subject terms, and identifying numbers such as LC card number or other accession number. Searchers may browse through dictionary indexes of these access points, and then create as many stored sets as desired. Sets may be operated upon with Boolean logic, or may be limited by various elements in the record such as language or date. Entries may be displayed in full or abbreviated formats. Patrons use the

system directly, without a librarian as intermediary, except for initial instruction or ready-reference checks when requested. While offline prints cannot be generated for public users of SCORPIO, those users may print at no charge on local terminal printers.

The MUMS system

MUMS (Multiple Use MARC System) had its origin in the need for the Library's Processing Department to develop online access to records for "known items," that is a book in hand, with the plan to develop expanded services later. At the same time that CRS was beginning to use SCORPIO the Processing Department was beginning use of MUMS. The system employed truncated search keys that, initially, permitted access by title, author/title, and LC card number. In the mid-seventies it became possible to search MUMS by author, in truncated or full form, and in the late seventies to do free text searching (called component word searching in MUMS) of author, title, note, and tracing fields in the MARC records.

Until 1978, when component word searching became possible, reference staff did not routinely instruct the public in the use of MUMS. The MARC tagged display, and certain complexities in syntax and subcommands, kept them from doing so, as did the need to sign off a SCORPIO file and sign into MUMS when making the switch. The advent of component word searching made public use of MUMS far more attractive--indeed essential for some searches.

The LC Online Catalog

In searching the online catalog, Library users have free access to the following files: 1) Library of Congress Computerized Catalog

(LCCC), the most heavily used file, representing 80% of the use on public terminals and 40% of overall SCORPIO use, and allowing searches by author, title, LC subject heading, class number, and card number of the entire MARC monographs data base; 2) the entire MARC file (books, serials, maps) through the MUMS system.

The online catalog requiring use of SCORPIO and MUMS, with their different sign-ons, file coverage, commands, subcommands, displays, and signoffs has caused some user confusion. For this reason and because of the expense of maintaining and developing different systems, the Library of Congress has taken certain steps to improve matters.

The Library's Retrieval Advisory Group (RAG) has suggested knitting together the two retrieval systems (MUMS and SCORPIO). The Group has called upon the experience and services of a wide range of staff and has found quite helpful the findings of a May 1978 survey of online catalog users. (See Appendix 1 for the questionnaire used in this survey, and Appendix 2 for a full report of the results.) RAG, however, felt the need for more extensive and more rigorously secured information than has been available to it. RAG requires specifics, for example, on which commands, if any, cause trouble, how readers actually use online searching techniques, and whether tutorials online or printed aids would better serve our patrons (both users and present non-users). We have appended a list of many of these questions in Appendix 3.

While RAG was attempting to do its work with such facts as it could find at hand, and while it was beginning to lay plans for a more extensive and rigorous survey of online catalog users than yet existed, the

Council on Library Resources was orchestrating a nationwide multilibrary survey that would answer much of LC's need. The Council supported the Research Libraries Group, OCLC, and others in their preliminary work to develop a research plan aimed at revealing the demographics of users of present online catalogs, the users' perceptions of the strengths and weaknesses of these catalogs, and the realities that lie behind these perceptions. Another goal was to reveal the present state of development of online catalogs and further cooperation among those who have developed or are developing online catalogs. The Library of Congress, with the support and encouragement of CLR, joined this effort in early 1981.

## METHODOLOGY

In April 1981, The Office of Planning and Development received approval of its grant request to the Council on Library Resources for participation in the national survey of public online catalog users. Having missed the first survey planning meeting, held in December of 1980, LC was brought up to date on progress and standard procedures by Douglas Ferguson of the Research Libraries Group. Robert Zich, Acting Director of the Office of Planning and Development, served as Study Co-ordinator at the Library of Congress and Rosemary Anderson, Planning Assistant was LC's Library Supervisor during the project. LC agreed to participate in the preliminary pretest.

At the end of April, survey staff distributed 25 preliminary non-user surveys and 25 preliminary user surveys in the Library's Main Reading Room (MRR), Science and Technology Reading Room (SRR), and Thomas

Jefferson Reading Room (JRR). Respectively, fourteen and fifteen of these questionnaires were returned and sent by LC for analysis to the University of California Division of Automation (UCDA).

At the same time, survey staff interviewed 25 system users in the above mentioned reading rooms following the interview questionnaire developed by Douglas Ferguson, RLG, slightly modified for LC's use. (See Appendix 4.) Results were tabulated and sent to Douglas Ferguson of RLG, Neal Kaske of OCLC, and members of LC's Survey Review Group, which included Henriette Avram of the Network Development Office, Pamela Bacher of the Automated Systems Office, Jeff Griffith of the Congressional Research Service, Sarah Pritchard of the General Reading Rooms Division, Vicky Reich of the Science Reading Room Division, and Elizabeth Stroup of the General Reference Office.

During May, survey staff developed an interview questionnaire for system non-users (See Appendix 5.) and 25 system non-users were interviewed. Again results were tabulated and forwarded to Douglas Ferguson of RLG.

On July 17, LC survey staff met with other survey participants in Chicago to develop a preliminary questionnaire based on data that had been gathered in previous months. Later in the month, Douglas Ferguson, RLG, visited the Office of Planning and Development to develop strategies for questionnaire dispersal, collection, records keeping and sampling. Through August and September, LC prepared for the national pre-test which was to begin in October; signs and appropriate supplies were designed and ordered, various staff members were apprised of intended survey procedures,

publicity was prepared, and a meeting was arranged to be held at LC to teach survey interview techniques to project participants.

During the eight weeks beginning with October 26, staff administered the survey pre-test according to the methodology prepared by RLG and following the schedule found as Appendix 6. Eighty-nine user and 162 non-user questionnaires were sent for analysis to the University of California Division of Automation. Based on the results of the pre-test, questionnaires were revised to their final form and a final sampling plan developed for questionnaire data collection, which began on April 5, 1982.

Due to difficulties experienced at LC in collecting an adequate sample of questionnaires during the pilot test, survey methodology for data collection was slightly modified, so that during data collection periods (See Appendix 7) every appropriate patron was approached. The Library sent a total of 557 user questionnaires and 300 non-user questionnaires for analysis by the University of California Division of Automation. Also in May, the Office of Planning and Development planned a series of focus group interviews (See Appendix 8.) which were conducted May 10 through 14 by Pauline Cochrane, Neal Kaske, and Karen Markey of OCLC.

First results of the data collection were received in August. Final revised results arrived in early September.

## SUMMARY OF RESULTS

Note: Appendix 9 provides full basic tabulations of the survey results both in LC and in the aggregate collection of participating libraries.

### I. Who are the systems users and non-users?

Users at LC differ from the aggregate in age and education and attendance. They are slightly older, on an average, and are more likely

to be college graduates. They are much less likely to use the library daily. LC non-users have a slightly higher level of education than aggregate non-users, but a slightly lower level of education than LC users. LC non-users are slightly older than LC users and are older than the aggregate users and non-users; they are also much more likely to be visiting the Library for the first time and are much less likely to use the library often. This is especially the case for LC "repeat" non-users--those who come repeatedly to the library but do not use the online catalog.

Users of online catalogs at LC are more likely to be male (64.8% vs. 35.2%), while the proportion of male to female users is less exaggerated among the aggregate (59.9% vs. 40.1%). The proportion of male to female non-users is more nearly equal, both at LC (52.7% male vs. 47.3% female) and in the aggregate (52.1% male vs. 47.9% female). (See Illustration 1.)

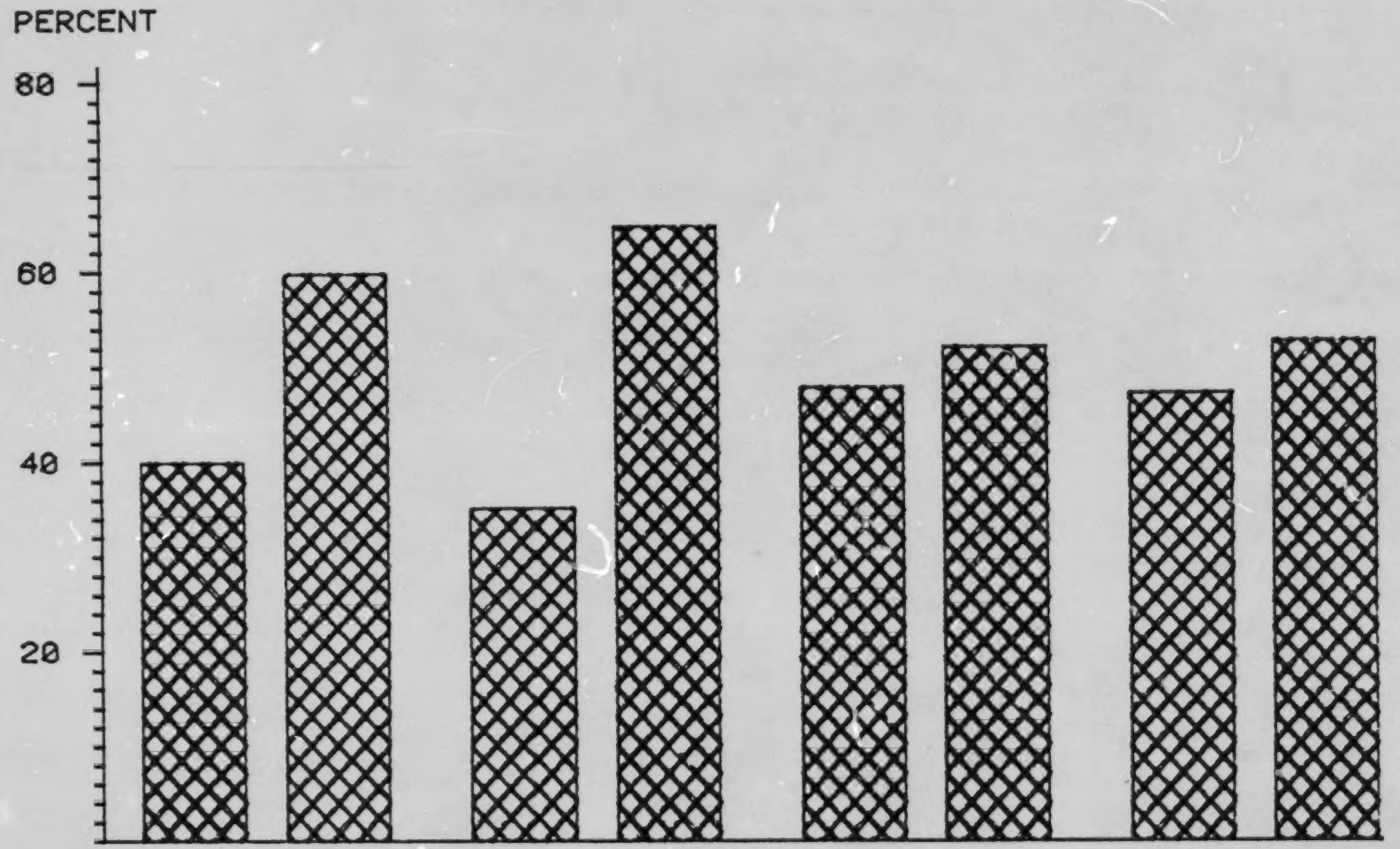
Among the LC users of the computer catalog, 42% said they were doing research for work, 29% for a course paper, and 21% for future publication. In the aggregate, more users were doing research for course work, which is not surprising due to the number of academic libraries involved.

LC has large numbers of first time and infrequent patrons and catalog users. Those who have not used the online catalog are even more apt to be new and infrequent visitors.

LC patrons in general appear to rely more on catalogs (online and card) than patrons of aggregate libraries. Computer catalog users report greater use of the card catalog than non-users. Non-users are less likely to have tried another computer system.

# SURVEY RESPONDENTS

ILLUSTRATION 1



A little more than half of LC non-users responded that they have not used the online catalog because they are just visitors. Large numbers also responded that they have not taken training (38%), did not know there was a computer catalog (38%), have not had time to learn it (36%), and have not had any need to use a catalog lately (22%).

When first-time visitors are selected out of the sample, most of these percentages rise slightly: 46% of repeat non-users have not taken training, 42% have not had time to learn, and 37% use the library infrequently or are only visitors. Repeat non-users at LC were slightly more aware of the computer catalog; 33% did not know there was one (as opposed to 38% of all non-users). However, as the age of a patron increases, so does the probability that he reported not knowing the online catalog exists. (See Figure 1.) Only 1 out of 12 (8%) of these repeat non-users responded that they do not like to use computers, as did 1% of non-users visiting for the first time.

In the aggregate, non-users are more likely than LC non-users to say they have not learned how to use the computer catalog because they have not needed any catalog lately. This might be related to LC patrons' heavier use of catalogs in general.

II. How do patrons learn and use the system?

LC users learn that there is an online catalog most often by seeing a terminal in the library (47%), though in much less proportion than do aggregate users (64%). More LC users than those in the aggregate heard of the online catalog from friends (22%) and Library staff (17%). LC users learn how to use the computer catalog [redacted] printed instructions

FIGURE 1

STATISTICAL ANALYSIS SYSTEM

TABLE OF OST1B BY OST10

OST1B DID NOT KNOW THERE WAS A COMPUTER CATALO OST10 MY AGE GROUP IS

| FREQUENCY<br>PERCENT<br>ROW PCT<br>COL PCT | 15 TO 19 YEARS | 20 TO 24 YEARS | 25 TO 34 YEARS | 35 TO 44 YEARS | 45 TO 54 YEARS | 55 TO 64 YEARS | 65 AND OVER |
|---|---|---|---|---|---|---|---|
| MARKED | 5 | 29 | 31 | 21 | 8 | 10 | 5 |
| | 1.68 | 9.76 | 10.44 | 7.07 | 2.69 | 3.37 | 1.68 |
| | 4.55 | 26.36 | 28.18 | 19.09 | 7.27 | 9.09 | 4.55 |
| | 22.73 | 31.87 | 36.90 | 42.86 | 44.44 | 45.45 | 50.00 |
| TOTAL | 22 | 91 | 84 | 49 | 18 | 22 | 10 |
| | 7.41 | 30.64 | 28.28 | 16.50 | 6.06 | 7.41 | 3.37 |

(71%) and from library staff (53%). (See Illustration 2.) Those who report having learned to use the online system with help from staff or printed material report more satisfactory searches than those who used other aid.

LC non-users think they could learn to use the computer catalog quickly--77.6% in less than an hour, 1/3 in less than 15 minutes. Most (86.7%) think the computer catalog would be somewhat (52.9%) or very (33.8%) easy to use. Repeat LC non-users are slightly less sanguine, the percentages being 70.9% who believe it takes less than an hour to learn, 24.3%, less than 15 minutes, and 82% who believe it is somewhat (56%) or very (26.7%) easy to learn.

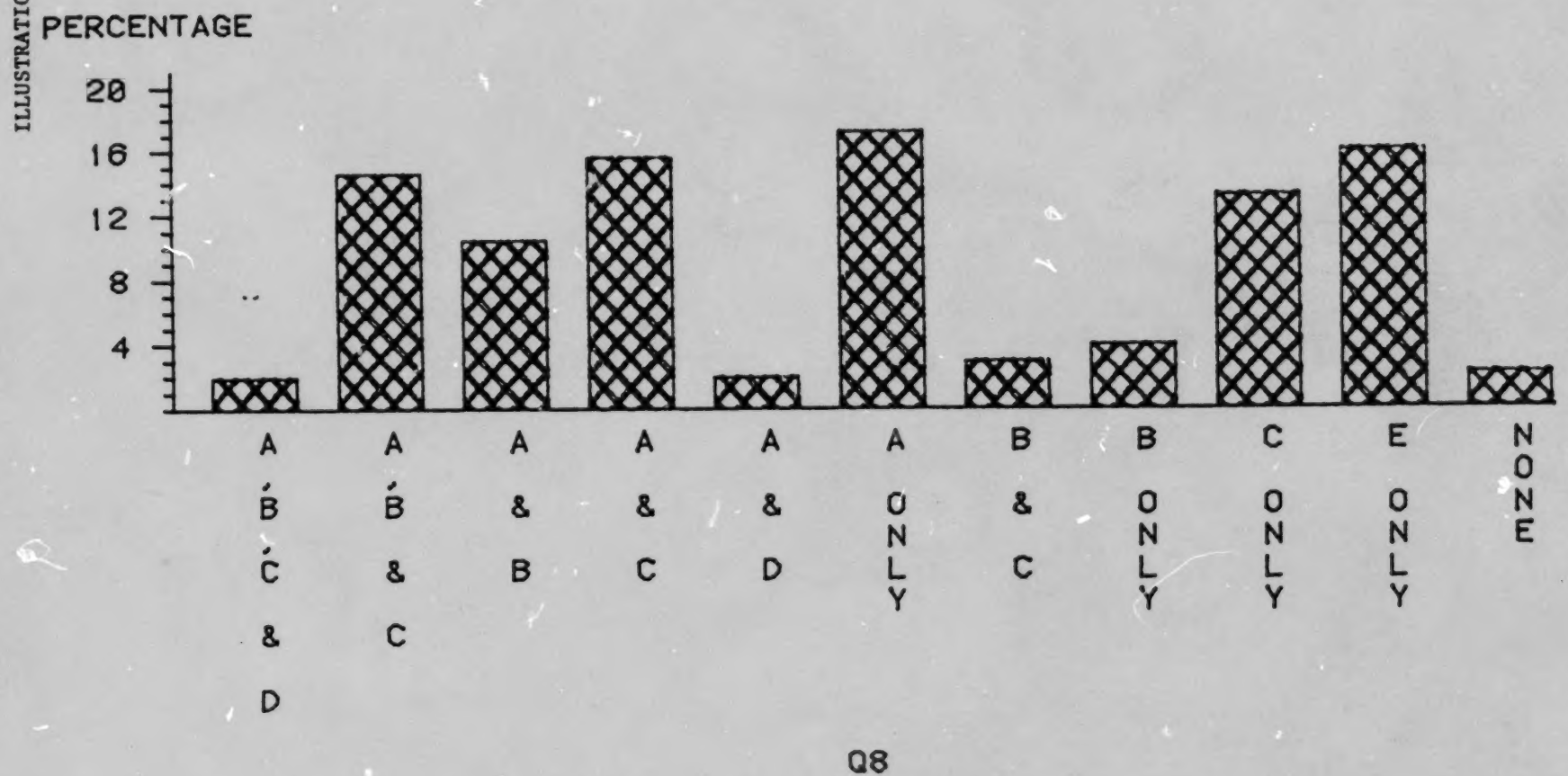
LC users are more apt to do subject searches, especially when they are infrequent visitors: 68% of LC users indicated that their most recent search was by subject; 38% were searching for a specific book; and 21% for books by a specific author. Frequent users seem slightly more likely than infrequent users to be doing known item searches. (See Figure 2.)

III. What success do users and non-users have with the system and what do they think of the system in general?

Almost 2/5 of the LC users said that in their most recent search they found all or more than all of what they had been looking for, and 54% found some of what they had been looking for, giving a total of 91% who found some, all, or more than all of what they had been looking for. Almost 2/3 found other things of interest, which is more than the aggregate, only half of whom found other things of interest. Women are more likely to

ILLUSTRATION 2

# HELP IN THIS SEARCH




A=PRINTED MATERIAL B=TERMINAL SCREEN
C=LIBRARY STAFF D=PERSON NEARBY
E=DID NOT GET HELP

FIGURE 2

DEMOGRAPHICS CROSSTABS: FOR LIBRARY OF CONGRESS

FILE FINAL (CREATION DATE = 08/03/82)

* * * * * * * * * * * * C R O S S T A B U L A T I O N * * * * * * * * * * * *
RQUEST2 (TABULATING 1) IN THIS SEARCH I WAS TRYING TO FIND:
BY RQ49 I USE THIS COMPUTER CATALOG
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * PAGE 1 OF 1

| | | RQ49 | | | | | |
|---|---|---|---|---|---|---|---|
| | COUNT / ROW PCT / COL PCT | EVERY VISIT | MOST VISITS | OCCASIONALLY | RARELY | NOT BEFORE TODAY | ROW TOTAL |
| | | 1 | 2 | 3 | 4 | 5 | |
| RQUEST2 | | | | | | | |
| RQ2A SPECIFIC BOOK ETC | | 63 | 58 | 24 | 5 | 29 | 179 |
| | | 35.2 | 32.4 | 13.4 | 2.8 | 16.2 | 36.8 |
| | | 47.7 | 38.2 | 35.3 | 21.7 | 25.9 | |
| RQ2B BOOKS ON TOPIC | | 82 | 106 | 48 | 17 | 85 | 338 |
| | | 24.3 | 31.4 | 14.2 | 5.0 | 25.1 | 69.4 |
| | | 62.1 | 69.7 | 70.6 | 73.9 | 75.9 | |
| RQ2C BOOKS BY SPEC AUTHOR | | 29 | 41 | 9 | 3 | 20 | 102 |
| | | 28.4 | 40.2 | 8.8 | 2.9 | 19.6 | 20.9 |
| | | 22.0 | 27.0 | 13.2 | 13.0 | 17.9 | |
| RQ2D PUB-DATE-SPELLING | | 14 | 18 | 5 | 3 | 11 | 51 |
| | | 27.5 | 35.3 | 9.8 | 5.9 | 21.6 | 10.5 |
| | | 10.6 | 11.8 | 7.4 | 13.0 | 9.8 | |
| RQ2E IF BOOK IS AVAILABLE | | 6 | 7 | 2 | 1 | 5 | 21 |
| | | 28.6 | 33.3 | 9.5 | 4.8 | 23.8 | 4.3 |
| | | 4.5 | 4.6 | 2.9 | 4.3 | 4.5 | |
| RQ2F OTHER LIBRARY W BOOK | | 1 | 2 | 1 | 0 | 3 | 7 |
| | | 14.3 | 28.6 | 14.3 | 0.0 | 42.9 | 1.4 |
| | | 0.8 | 1.3 | 1.5 | 0.0 | 2.7 | |
| COLUMN TOTAL | | 132 | 152 | 68 | 23 | 112 | 487 |
| | | 27.1 | 31.2 | 14.0 | 4.7 | 23.0 | 100.0 |

PERCENTS AND TOTALS BASED ON RESPONDENTS

487 VALID CASES 38 MISSING CASES

report having found less that they were searching for than men report; they are also less likely to be satisfied with their search. Greater numbers of men than women found more than they were looking for (79% vs. 21%). (See Figure 3.)

Almost 9 in 10 users at LC found their most recent search somewhat or very satisfactory (38% and 50%; 88% in total), and 95% think the computer catalog about the same as or better than the card catalog (12% and 83%). Those who responded with a somewhat or very favorable attitude towards the computer catalog were also greatly in the majority (18% and 78%; 96% in total).

LC users generally have a more favorable attitude towards the computer catalog than the aggregate and are slightly more apt to prefer it to the card catalog. LC non-users report having a favorable attitude towards the computer catalog (93%, the sum of almost 33% who have a somewhat favorable and 61% who have a very favorable attitude), which is a more favorable general attitude towards the computer catalog than the aggregate non-users. However, the attitude of repeat LC non-users is slightly less favorable than the aggregate non-users. (As noted in section I. above, at LC more repeat non-users than non-users in general, when asked why they do not use the computer catalog, responded that they do not like to use computers.)

Many more LC repeat non-users than aggregate non-users cannot decide whether the computer catalog is better than, equal to, or worse than the card catalog. This same LC group indicates a greater likelihood that they will use the computer catalog in the future (83.4% repeat non-users vs. 78.5% LC non-users in general, and 75% aggregate non-users). Only 3.7%

FIGURE 3

Demographic Crosstabs: For Library of Congress

Crosstabulation of Q55: Sex

RQ9 General Attitude toward Computer Cat

| Q9 | RQ55 1. FEMALE | RQ55 2. MALE | ROW TOTAL |
|---|---|---|---|
| 1. VERY FAVORABLE | 131 | 249 | 380 |
| | 34.5 | 65.5 | 77.6 |
| | 76.2 | 78.3 | |
| | 26.7 | 50.8 | |
| 2. SOMEWHAT FAVORAB | 30 | 59 | 89 |
| | 33.7 | 66.3 | 18.2 |
| | 17.4 | 18.6 | |
| | 6.1 | 12.0 | |
| 3. SOMEWHAT UNFAVOR | 11 | 7 | 18 |
| | 61.1 | 38.9 | 3.7 |
| | 6.4 | 2.2 | |
| | 2.2 | 1.4 | |
| 4. VERY UNFAVORA | 0 | 3 | 3 |
| | 0.0 | 100.0 | 0.6 |
| | 0.0 | 0.9 | |
| | 0.0 | 0.6 | |
| COLUMN TOTAL | 172 | 318 | 490 |
| | 35.1 | 64.9 | 100.0 |

RQ6 In Rel to what I was looking for search

| RQ6 | RQ55 1. FEMALE | RQ55 2. MALE | ROW TOTAL |
|---|---|---|---|
| 1. VERY SATISFACTOR | 73 | 169 | 242 |
| | 30.2 | 69.8 | 50.0 |
| | 42.2 | 54.3 | |
| | 15.1 | 34.9 | |
| 2. SOMEWHAT SATISFA | 78 | 106 | 184 |
| | 42.4 | 57.6 | 38.0 |
| | 45.1 | 34.1 | |
| | 16.1 | 21.9 | |
| 3. SOMEWHAT UNSATIS | 14 | 24 | 38 |
| | 36.8 | 63.2 | 7.9 |
| | 8.1 | 7.7 | |
| | 2.9 | 5.0 | |
| 4. VERY UNSATISFACT | 8 | 12 | 20 |
| | 40.0 | 60.0 | 4.1 |
| | 4.6 | 3.9 | |
| | 1.7 | 2.5 | |
| COLUMN TOTAL | 173 | 311 | 484 |
| | 35.7 | 64.3 | 100.0 |

RQ5 In this search I found

| RQ5 | RQ55 1. FEMALE | RQ55 2. MALE | ROW TOTAL |
|---|---|---|---|
| 1. MORE THAN | 22 | 67 | 89 |
| | 24.7 | 75.3 | 18.2 |
| | 12.7 | 21.3 | |
| | 4.5 | 13.7 | |
| 2. ALL OR MOST | 27 | 66 | 93 |
| | 29.0 | 71.0 | 19.1 |
| | 15.6 | 21.0 | |
| | 5.5 | 13.5 | |
| 3. SOME | 110 | 154 | 264 |
| | 41.7 | 58.3 | 54.1 |
| | 63.6 | 48.9 | |
| | 22.5 | 31.6 | |
| 4. NOTHING | 14 | 28 | 42 |
| | 33.3 | 66.7 | 8.6 |
| | 8.1 | 8.9 | |
| | 2.9 | 5.7 | |
| COLUMN TOTAL | 173 | 315 | 488 |
| | 35.5 | 64.5 | 100.0 |

of LC's repeat non-users think the computer catalog likely to be worse than the card catalog, compared with an also very low 2.8% of the aggregate non-users.

IV. To which specific features do people respond favorably?

Users were asked to characterize their experiences with particular features of the computer catalog. Users at LC responded very positively about a few features, especially the assistance given them by Library staff. They found author searches easy and responded almost as positively about title searches. They said that they found the displays for a single item easy to understand.

V. What specific features cause a problem?

People at LC find the terminals and physical setting of the computer catalog stations fine, except that approximately half--significantly more than in the aggregate--want more writing space. They also have problems in response rate, understanding messages and instructions on the screen, remembering commands in the middle of a search, and in scanning backwards and forwards through a long display. In focus group interviews, users spoke often of a need to improve the system's browse mode, e.g., by putting more bibliographic information in a browse display; and/or by putting in a mechanism for revealing the scheme of subject headings in a portion of the file and by adding the ability to browse by call number.

LC users find it difficult to remember what the computer catalog includes. Comments in the focus group interviews strongly supported this survey finding. Users have problems with sets, especially increasing and reducing the results of a search and scanning through a long display. This

problem and allied ones became so conspicuous in focus group interviews that they received their own neologism: "relearnability." To quote the principal interviewer: "Whether patrons used the OPAC twice a week or twice a year, they found it necessary to relearn."

Users say finding the correct subject term is difficult. They would like to have the ability to see a list of words related to their search terms (41%) and, most of all, to search a book's table of contents, summary or index (46%).

VI. What changes do people say they want?

Given a range of possible materials which might be added to the computer catalog, more LC users than aggregate users wanted dissertations added (44% vs. 21%). LC users also wanted "journal or magazine titles" (43%). LC's computer catalog includes these already. Reference librarians familiar with online catalog users suggest that users responding to this question referred to articles, rather than titles. This tends to be borne out by comments received in the focus group interviews. Users also desired older books (39%) and newspapers (37%).

LC users want more terminals (51%) and want them added in a wider variety of places, specifically, in places away from the card catalogs (27%) and outside of the Library buildings (31%).

Two other features LC users would like added are location, or "check-out," information (44%) and step-by-step instructions (30%). The desire for the latter emerged in the focus group interviews as stronger than it appeared in the survey results. Many patrons interviewed spoke of a desire for system tutorials, hints, and even "suggestive prompting."

## RECOMMENDATIONS

The Planning Office is making a number of requests through appropriate mechanisms in the Library of Congress that aim at taking action on findings of the survey. Specifically, it has requested that:

1. Since patrons report difficulty manipulating sets (scanning long displays, reducing results, and so on),
   a.) LC should continue development of the HELP command at maximum possible speed;
   b.) LC should introduce as soon as feasible the revision of the text of error messages in MUMS and SCORPIO proposed by the Retrieval Advisory Group in its Semi-Annual Report dated November, 1980;
   c.) LC should adopt as soon as feasible the unified command structure proposed by the Retrieval Advisory Group in its Semi-Annual Report dated November, 1981;
   d.) LC should adapt for the public the PLATO-based system developed in CRS for instruction in the use of certain files in SCORPIO. This new online instructional system should cover all MUMS and SCORPIO files.
   e.) LC should develop and incorporate in its online catalog a system of "suggestive prompts."
2. Since users find it difficult to remember what is listed in the online file, and wish older materials to be included,

LC should proceed with haste to integrate records for older books and periodicals into the online catalog until it encompasses all that is represented in the card catalog. Any additions to this file should be made in simple increments. Survey results suggest that these increments should, if possible, include citations to periodical articles, dissertations, and newspapers.

3. Since patrons request circulation information to be part of the bibliographic record and since machine-readable location information is key to enhanced book service, LC should add "dynamic" location information to the bibliographic record.

More generally, the Planning Office is working within LC to address problems associated with subject access to bibliographic records. These problems seem, from the data of the survey, to be multifold and to call for a multipart attack both at LC and within the library community at large. We urge the Council on Library Resources to continue its work of orchestrating the national effort to solve these problems.

The problem of subject access is at least threefold: 1.) inherent difficulties in searching by subject; 2.) difficulties in effectively exploiting subject information that now exists in bibliographic records; and 3.) difficulties arising from the skimpiness of existing subject information.

Inherent difficulties are beyond the scope of these recommendations. It was, undoubtedly, the difficulties in exploiting the subject information that now exists in bibliographic records that elicited from

system users the comments that they have trouble finding the correct subject term, that they would like a list of words related to their search words, and that they have difficulties enlarging the sets.

There are many approaches to these problems. An immediate solution is to place the subject authority file online. Second, is to include in that file extensive scope notes, and make these searchable and displayable in various ingenious ways. Third, is to make the Dewey and LC Classification Tables available and fully searchable online* and to link term searches done on the Tables to bibliographic records containing the subject classes. There are other techniques, as well, which can be used to exploit the data in existing records and make our subject access more effective. The Library of Congress is exploring these possibilities, and will introduce into its system those that appear feasible and effective.

Enriching the subject record may be beyond the present resources of the Library of Congress. It is possible that at some point the Cataloging in Publication Office may be able to solicit accurate, succinct descriptions of new books from publishers, and to make these descriptions part of the bibliographic records. It is also possible that devices that do optical character reading may one day permit routine input of tables of content, indexes, abstracts and the like. It is even possible that the library community may undertake a cooperative project to input manually such data in "important" titles. The Planning Office at LC will investigate these possibilities but recognizes that the prospects for early success are not good.

*That is, to make searching available that covers not only the class numbers, but the defining words and phrases tied to them.

## CONCLUSION

This survey was helpful in verifying what LC staff suspected were the problems and strengths of our online systems. The results give added incentive to many projects already undertaken at LC which address our users concerns. Several projects have been completed which help remedy problems identified by the data. A single page brochure describing what materials are found in the online catalogs, how to request information, and how to get help, has been designed and is being distributed. We hope the brochures will educate some of our non-users about the system and encourage them to become users. The Computer Catalog Center in the Main Reading Room has been redesigned with new, smaller printers providing more writing space for patrons, a problem more than one-half of the respondents noted. LC has begun inputting records of the Library's older records into the online system, and over a million and a half of these records are currently searchable. These changes and those that would flow from implementation of the recommendations of the present report should greatly alleviate the problems identified in the survey and help the Library of Congress to provide the flexible state-of-the-art bibliographic retrieval system for which we all strive.

APPENDIX 1

# _____

date _____

place _____

time _____

# *LIBRARY OF CONGRESS*

# *SCORPIO USER SURVEY*

## *1979*

For further information about this survey, contact Sarah Pritchard, General Reading Rooms Division, room LCB 144, or telephone ~~426~~ 5520
287

This survey is designed to gather information about the users of our computer system (SCORPIO). By taking the time to fill it out, you will help us gain a clearer understanding of your needs and problems, and we will be better able to design services and resources to meet them. We thank you for your cooperation, and encourage you to add any comments on the back page.

First, please let us know how accessible our computer services are:

Q1. How long did you have to wait for a terminal today? (Circle the number)

1 DID NOT HAVE TO WAIT
2 LESS THAN 5 MINUTES
3 5 TO 10 MINUTES
4 10 TO 20 MINUTES
5 MORE THAN 20 MINUTES

Q2. How frequently do you use the terminals? (Circle the number)

1 THIS IS MY FIRST USE
2 AT LEAST ONCE A DAY
3 AT LEAST ONCE A WEEK
4 AT LEAST ONCE A MONTH
5 INFREQUENTLY; ONLY A FEW TIMES EVER

Q3. How frequently do you have to wait for a terminal? (Circle the number)

1 THIS IS MY FIRST USE OF A TERMINAL
2 NEVER
3 SOMETIMES
4 OFTEN

Q4. How long did you have to wait to use a printer today? (Circle the number)

1 DID NOT USE A PRINTER TODAY
2 DID NOT HAVE TO WAIT
3 LESS THAN 5 MINUTES
4 5 TO 10 MINUTES
5 10 TO 20 MINUTES
6 MORE THAN 20 MINUTES

Q5. How frequently do you use printers? (Circle the number)

1 THIS IS MY FIRST USE
2 NEVER ------ (If so, please skip to question #7)
3 SOMETIMES
4 OFTEN
5 EVERY TIME I USE SCORPIO

Q6. How frequently do you have to wait for a printer? (Circle the number)

1 THIS IS MY FIRST USE OF A PRINTER
2 NEVER
3 SOMETIMES
4 OFTEN

Q7. When others are waiting to use a terminal, what limit should LC establish on the use by any one person? (Circle the number)

1 15 MINUTES
2 30 MINUTES
3 45 MINUTES
4 NO LIMIT
5 HAVE AN "EXPRESS" TERMINAL, LIMIT 5 MINUTES; OTHERS WITH NO LIMIT
6 HAVE AN "EXPRESS" TERMINAL, LIMIT 5 MINUTES; OTHERS WITH 30 OR 45 MINUTE LIMIT
7 OTHER: _____

Q8. When others are waiting to use a printer, what limit should LC establish on the use by any one person? (Circle the number)

1 15 MINUTES
2 30 MINUTES
3 45 MINUTES
4 5 PAGES OF PRINTER PAPER
5 10 PAGES OF PRINTER PAPER
6 NO LIMIT
7 OTHER: _____

Next, we would like to know a little bit about the way you use the Library of Congress:

Q9. How often do you come to the Library of Congress (LC) ?
(Circle the number)

1 THIS IS MY FIRST TIME
2 OCCASIONALLY
3 SEVERAL TIMES A MONTH
4 SEVERAL TIMES A WEEK

Q10. At what time of day do you usually come to LC? (Circle the number)

1 WEEKDAYS -- EARLY MORNING
2 WEEKDAYS -- MID-DAY
3 WEEKDAYS -- LATE AFTERNOON
4 WEEKDAYS -- EVENING
5 WEEKENDS

Q11. Do you live in the Washington metropolitan area or have you come from out-of-town? (Circle the number)

1 LIVE IN THE WASHINGTON METROPOLITAN AREA
2 FROM OUT-OF-TOWN, AND MADE A SPECIAL TRIP TO USE LC
3 FROM OUT-OF-TOWN, BUT DID NOT MAKE A SPECIAL TRIP TO USE LC

Q12. Is your use of LC related to-- (Circle the number)

1 UNDERGRADUATE OR VOCATIONAL EDUCATION
2 POST-GRADUATE OR PROFESSIONAL EDUCATION
3 DUTIES AS A MEMBER OF AN ACADEMIC FACULTY
4 CONGRESSIONAL STAFF WORK
5 EMPLOYMENT IN A FEDERAL GOVERNMENT AGENCY (NON-CONGRESSIONAL)
6 LC STAFF WORK
7 WORK AS A PRIVATE RESEARCHER OR AUTHOR
8 OTHER PROFESSIONAL OR WORK-RELATED RESEARCH
9 PERSONAL, NON-WORK RESEARCH

Q13. In which subject areas are you working today?_____
_____

Q14. Are you primarily interested in materials published before or after 1969? (Circle the number)

1 BEFORE 1969
2 AFTER 1969
3 BOTH

Q15. How did you first hear about our computer system (SCORPIO)? (Circle the number)

1 SAW IT IN THE LIBRARY OF CONGRESS (LC)
2 WAS REFERRED BY A LIBRARIAN AT LC
3 FROM A FRIEND, COLLEAGUE, EMPLOYER, OR PROFESSOR
4 SAW IT MENTIONED IN A PUBLICATION (Where?_____ _____)
5 OTHER:_____

Q16. Have you ever used another computer information retrieval system, such as MEDLINE, LEXIS, ERIC, NTIS, and others? (Circle the number)

1 NO
2 YES

Q17. How long have you been using SCORPIO? (Circle the number)

1 JUST STARTED TODAY
2 LESS THAN ONE MONTH
3 1 TO 4 MONTHS
4 MORE THAN 4 MONTHS (NOT NECESSARILY CONTINUOUSLY)

Q18. Where do you usually prefer to use terminals? (Circle the number)

1 COMPUTER CATALOG CENTER (REAR OF CARD CATALOG)
2 MAIN READING ROOM, OUTSIDE ALCOVES
3 MAIN READING ROOM, ON DECK 33 (THROUGH ALCOVE 6)
4 THOMAS JEFFERSON READING ROOM
5 SCIENCE READING ROOM
6 CONGRESSIONAL: READING ROOM, REFERENCE CENTERS, OR OFFICES
7 WHEREVER CONVENIENT FOR MY WORK
8 WHEREVER THERE IS A PRINTER AVAILABLE
9 OTHER:_____

Q19. Where in the library would you like to see more terminals? (Circle all that apply)

1 DON'T NEED MORE TERMINALS
2 NEED MORE, BUT DOESN'T MATTER WHERE
3 MAIN READING ROOM
4 THOMAS JEFFERSON READING ROOM
5 NEWSPAPER AND CURRENT PERIODICAL READING ROOM
6 STACKS; WHERE?_____
7 OTHER: _____

Now, we would like to ask you about your experiences in learning to use the computer system (SCORPIO):

Q20. How did you first learn to use SCORPIO? (Circle the number)

1 FROM A LIBRARIAN AT THE COMPUTER CATALOG CENTER (AT THE REAR OF THE CARD CATALOG)
2 FROM A LIBRARIAN IN ANOTHER PART OF LC (WHERE?_____)
3 FROM A FRIEND OR ANOTHER LIBRARY USER
4 FROM THE FLIP-CHART BESIDE THE TERMINAL
5 FROM THE BRIEF CARDS OR SHEETS ON THE TERMINAL
6 FROM IN-HOUSE TRAINING FOR LC OR CONGRESSIONAL STAFF; SPECIFICALLY, _____
7 OTHER:_____

Q21. Was it easy or hard to learn to use SCORPIO? (Circle the number)

1 HARD
2 NEITHER HARD NOR EASY
3 EASY

Q22. Given what you now know about SCORPIO, and the use you make of it, could you benefit from additional training or written material? (Circle the number)

1 NO
2 YES

Q23. Consider the following aspects of learning to use SCORPIO. Was it easy or hard to learn how to do each?

| | Was it easy or hard to learn this? (Circle your answer) | | |
|---|---|---|---|
| 1. decide which command to use ..... | EASY | MEDIUM | HARD |
| 2. remember the order of the commands ..... | EASY | MEDIUM | HARD |
| 3. get the form of the command right ..... | EASY | MEDIUM | HARD |
| 4. specifying the subject heading correctly ... | EASY | MEDIUM | HARD |
| 5. inserting the correct spacing ..... | EASY | MEDIUM | HARD |
| 6. punctuating the commands and headings ..... | EASY | MEDIUM | HARD |
| 7. understanding the computer's messages ..... | EASY | MEDIUM | HARD |
| 8. understanding the printed instructions ..... | EASY | MEDIUM | HARD |
| 9. figuring out what to do when you have a problem | EASY | MEDIUM | HARD |

Q24. Would the following things have made it easier for you to use SCORPIO?

| | Would this have helped you? (Circle your answer) | | |
|---|---|---|---|
| 1. more assistance from Library staff ..... | NO | YES | MAYBE |
| 2. more complete instructions displayed by SCORPIO ..... | NO | YES | MAYBE |
| 3. group instruction in the use of SCORPIO ..... | NO | YES | MAYBE |
| 4. individual instruction by appointment ..... | NO | YES | MAYBE |
| 5. computer-assisted (on-line) instruction ..... | NO | YES | MAYBE |
| 6. more detailed manuals by the terminals ..... | NO | YES | MAYBE |
| 7. detailed instructions you could take away with you ..... | NO | YES | MAYBE |
| 8. a movie or slide-show on how to use SCORPIO .. | NO | YES | MAYBE |

Q25. Do the following factors make it easy or hard for you to physically use the terminal?

| | Factor makes it: (Circle your answer) | | |
|---|---|---|---|
| 1. the layout of the keys and control buttons .. | HARD | EASY | NO EFFECT |
| 2. controlling the brightness of the screen .... | HARD | EASY | NO EFFECT |
| 3. the size of the letters on the screen ..... | HARD | EASY | NO EFFECT |
| 4. the procedure for operating the printer ..... | HARD | EASY | NO EFFECT |
| 5. the procedure for setting the margins on the printer ..... | HARD | EASY | NO EFFECT |
| 6. understanding the function of some of the control keys and switches ..... | HARD | EASY | NO EFFECT |
| 7. other:_____ | HARD | EASY | NO EFFECT |

Q26. Would it help you to be able to reserve the facilities for the following services?

| | Would you reserve for: (Circle your answer) | |
|---|---|---|
| 1. instruction in SCORPIO or other automated systems ..... | NO | YES |
| 2. use of a terminal ..... | NO | YES |
| 3. use of a printer ..... | NO | YES |
| 4. discussing your search needs with a librarian who would then perform the search for you (not necessarily right away) ..... | NO | YES |

Q27. If we were unable to provide the following services free of charge, would you be willing to pay a reasonable price for them?

| | Would you pay for: (Circle your answer) | |
|---|---|---|
| 1. written instruction manuals to take with you ..... | NO | YES |
| 2. having searches performed and printed out by a librarian ..... | NO | YES |
| 3. printing at your terminal ..... | NO | YES |
| 4. having long lists of citations printed "off-line," that is, not during your search at the terminal, but at the central computer facility and to be picked up later ..... | NO | YES |

These last questions will discuss your approaches to searching on SCORPIO:

Q28. For what general purpose are you using SCORPIO today? (Circle all that apply)

1 TO PREPARE AN EXTENSIVE BIBLIOGRAPHY
2 TO SELECT A FEW GOOD ITEMS
3 TO SCAN THE AVAILABLE LITERATURE OR FACTUAL INFORMATION
4 TO CHECK SPECIFIC FACTUAL INFORMATION (LEGISLATIVE OR ORGANIZATIONAL)
5 OTHER: _____

Q29. Which of the following types of information do you expect to obtain from SCORPIO today?

| | Expect to find this: (Circle your answer) | |
|---|---|---|
| 1. what LC has by a particular author ..... | NO | YES |
| 2. what books LC has on a particular subject ..... | NO | YES |
| 3. periodical articles in current events areas ..... | NO | YES |
| 4. an author's name or other name ..... | NO | YES |
| 5. specific titles (already knowing the authors) ..... | NO | YES |
| 6. call numbers for specific works (when you already know the author or title) ..... | NO | YES |
| 7. legislative information ..... | NO | YES |
| 8. names of organizations ..... | NO | YES |

Q30. In your last search on SCORPIO, under which types of headings did you mainly look? (Circle all that apply)

1 PERSONAL NAMES
2 ORGANIZATION OR AGENCY NAMES
3 TITLES
4 BILL NUMBERS
5 LC CARD NUMBERS
6 SUBJECTS

If you searched by subject: Which system did you use? (Circle all that apply)

1 LC SUBJECT HEADINGS LIST (LARGE RED VOLUMES)
2 LEGISLATIVE INDEXING VOCABULARY (LIV: IN LOOSELEAF BINDER, USED FOR BIBL OR CG FILES)
3 LC CLASSIFICATION NUMBER
4 THE RETRIEVE COMMAND
5 BROWSE RANDOMLY UNDER A WORD YOU KNOW

Q31. In general, is the order in which citations are displayed by SCORPIO (roughly chronological) satisfactory for your searching? (Circle the number)

1 NO
2 YES

Q32. For each of the following choices, indicate how preferable it would be to the currently used order of citations. (Circle your answer)

| | How would it compare to chronological order? | | |
|---|---|---|---|
| 1. reverse chronological order (most recent entry first) ..... | WORSE | SAME | BETTER |
| 2. alphabetical by title ..... | WORSE | SAME | BETTER |
| 3. alphabetical by author ..... | WORSE | SAME | BETTER |
| 4. other _____ | WORSE | SAME | BETTER |

Q33. When you don't find information through SCORPIO, which of the following steps do you take? (Circle all that apply)

1 TRY A DIFFERENT SEARCH TERM ON SCORPIO
2 TRY A DIFFERENT DATA BASE (FILE) ON SCORPIO
3 ASK COMPUTER CATALOG CENTER LIBRARIAN FOR ASSISTANCE
4 ASK REFERENCE LIBRARIAN IN READING ROOM ABOUT OTHER SOURCES
5 GO TO CARD CATALOG
6 GO TO PRINTED INDEXES AND BIBLIOGRAPHIES
7 GIVE UP COMPLETELY
8 OTHER: _____

Q34. Did you use the card catalog in addition to SCORPIO today? (Circle the number)

1 NO (If no, please skip to question #34)
2 YES

(If yes:) What did you look under? (Circle all that apply)

1 AUTHOR (PERSONS OR ORGANIZATIONS)
2 TITLE (OF BOOKS OR PERIODICALS)
3 SUBJECT

Q35. For the following types of searches or problems, is SCORPIO or the card catalog easier to search? If you have another example that works noticeably better in one system than the other, you may add it at the end.

| | For this search, which system is easier? (Circle your answer) | | | |
|---|---|---|---|---|
| 1. searching for books (within last ten years) by subject ..... | SCORPIO | SAME | CARDS | DON'T KNOW |
| 2. searching by author ..... | SCORPIO | SAME | CARDS | DON'T KNOW |
| 3. searching by title ..... | SCORPIO | SAME | CARDS | DON'T KNOW |
| 4. searching by gov't agency names ... | SCORPIO | SAME | CARDS | DON'T KNOW |
| 5. searching for items published at a certain date ..... | SCORPIO | SAME | CARDS | DON'T KNOW |
| 6. searching for items published in a certain language ..... | SCORPIO | SAME | CARDS | DON'T KNOW |
| 7. finding cross-references ..... | SCORPIO | SAME | CARDS | DON'T KNOW |
| 8. understanding the filing order..... | SCORPIO | SAME | CARDS | DON'T KNOW |
| 9. understanding the difference between author/title/subject entries (on cards or in SCORPIO index).... | SCORPIO | SAME | CARDS | DON'T KNOW |
| 10. other:_____ | SCORPIO | SAME | CARDS | DON'T KNOW |
| _____ .... | SCORPIO | SAME | CARDS | DON'T KNOW |

Q36. Could SCORPIO completely replace the card catalog for your purposes today? (Circle the number)

1 NO
2 YES (If yes, please skip to question #38)

Q37. If no, why can't SCORPIO replace the card catalog for your purposes today? (Circle all that apply)

1 IT LACKS PERIODICAL TITLES
2 IT LACKS MATERIALS IN SPECIAL FORMATS (MUSIC, MICROFORMS, MAPS, ETC.)
3 IT LACKS MATERIALS IN CERTAIN LANGUAGES (CHINESE, RUSSIAN, ETC.)
4 IT DOES NOT INCLUDE WORKS CATALOGED BEFORE 1968
5 IT CANNOT BE SEARCHED BY THE NAME OF A SERIES
6 THE COMPUTER IS "DOWN" (NOT WORKING) TOO OFTEN
7 THERE IS TOO OFTEN A WAIT FOR TERMINALS
8 IT IS TOO COMPLICATED TO LEARN TO USE QUICKLY
9 OTHER:_____

Q38. The Library of Congress would appreciate any other comments, suggestions, or criticisms that you have related to the SCORPIO system or other public services:

APPENDIX 2

# SCORPIO: A STUDY OF PUBLIC USERS OF THE LIBRARY OF CONGRESS INFORMATION SYSTEM

by

Sarah M. Pritchard
General Reading Rooms Division
Library of Congress

January 1981

As library catalogs have grown and changed, new forms of catalogs are being tested and evaluated. COM, online, and computer-produced book catalogs are affecting library use and services, and we need to find the best ways to integrate these catalogs into the reference environment and to identify the users' reactions to them. The Library of Congress has an online catalog which is used directly by the public throughout the reading rooms and which provides full author, title, and subject access to the MARC file and to selected in-house data bases. This article describes a preliminary study which was made of SCORPIO, a segment of the developing Library of Congress Information System (LOCIS) and which may contribute to the understanding and development of online catalogs.

## The SCORPIO system

The beginnings of the SCORPIO system (Subject-Content Oriented Retriever for Processing Information Online) date from the late 1960's, when the Library's Congressional Research Service (CRS) began developing an online information retrieval system furnishing legislative and bibliographic data. The Bill Digest file (CG series) and the Bibliographic Citation file (BIBL/CITN) were available online to CRS staff members by 1969. The SCORPIO system at the Library of Congress was an outgrowth of the "non-unique key retriever" capability which was developed for CRS about 1972. The structure of the SCORPIO/Logic Library System is technically based on work which originated in the middle 1960's at Lockheed under sponsorship of the National Aeronautics and Space Administration under the names "Dialog" and "Recon." The full SCORPIO programs, created by the Library's Information Systems Office (now the Automated Systems Office, ASO), were in use in a few Congressional offices by 1974, with the addition of the National Referral Center file (NRCM) and CRS's Issue Briefs (ISSU). In April, 1975, the first computer terminal for public use was installed in the Science

Reading Room, providing access to the National Referral Center file (NRCM, a directory of organizations) and to the Selected Science and Technology data base: 90,000 English-language monographs in LC classes, Q, R, S, and T selected from the MARC tapes. Without any special announcements or training, the system was set up to test the software, hardware, and public acceptance.

SCORPIO evolved, based on feedback from this successful experiment and from LC and Congressional staff, and in May, 1977, the Computer Catalog Center (CCC) was opened adjacent to the Main Reading Room. Located in the CCC were six Sycor CRT terminals, two with Tally local printers attached. Brief printed instructions were available, and a reference librarian was on duty to assist users with the system. There are currently a total of twelve terminals and four printers for public use in the Main Reading Room area, and about fifteen public terminals scattered throughout other reading rooms. Considerable expansion in public terminals is planned in 1981. The Library's computer systems support over 1500 terminals for reference, processing, and administrative use (including terminals in Congressional offices).

"SCORPIO" refers to a retrieval language with consistent command and display techniques across the different files in this portion of the LOCIS. Access points usually include authors or other personal names, titles, corporate names, subject terms, and identifying numbers such as LC card number or other accession number. Searchers may browse through dictionary indexes of these access points, and then create as many stored sets as desired. Sets may be operated upon with Boolean logic, or limited by various elements in the record such as language or date. Entries may be displayed in full or abbreviated formats. Patrons use the system directly, without a librarian as intermediary except for initial instruction or ready-reference checks. While off-line prints

line prints cannot be generated for public users of SCOPRIO, those users may print at no charge on local terminal printers.

Library users have free access to the following files: 1) Library of Congress Computerized Catalog (LCCC), allowing searches by author, title, LC subject heading, class number, and card number of the entire MARC monographs data base; 2) National Referral Center file (NRCM), serving as a directory of organizations which offer information resources in science, technology, and social science; and 3) a series of files produced by the General Accounting Office based on the three-volume Congressional Sourcebook series. The public has limited access to certain CRS files which are in the public domain, providing legislative and public policy information. The most heavily used file is the LCCC, which represents 80% of the use on public terminals, and 40% of overall SCORPIO use. As a whole, the LOCIS includes MUMS (Multiple-Use MARC System) and several other administrative and information retrieval subsystems. The only portions of the system involved in this study were the publicly available SCORPIO databases mentioned above.

When this study was first conceived, the CCC had been in operation for a year and no formal evaluation had taken place. Although we were serving 40 to 50 users who were performing about 200 searches each day, judging from cursory reference and automation statistics, there were many questions to be answered. We needed to know who our users were, what approaches they were taking to SCORPIO, how effective our instructional methods were, and how the online catalog compared with the card catalog. We also needed to assess the adequacy of our hardware and software. Some specific data were available from ASO as to the number of transactions per day per terminal and which files were accesed, but some kind of user survey was necessary to get a fuller picture of public usage.

Survey development

A literature search revealed an interesting gap: between the great body of information on card catalog use, and on the use of online information retrieval services, there was no published work on direct (i.e. not via an intermediary) use of an online catalog. Nevertheless, the techniques of both types of studies were pertinent to the SCORPIO survey. A state-of-the-art review by Ruth Hafter (1) of catalog research appeared in late 1979, and she also observed the lack of information noted here. Although problems in locating entries and understanding bibliographic data are encountered in online as well as card catalogs, some considerations of card catalog studies were inapplicable, such as economic ones. Since there is no charge to users for SCORPIO use, and since all the data have been entered, there was no pressure to determine the minimum number of fields one would have to convert, or the most time-saving methods of searching the file. The common measures of precision and recall for information retrieval evaluation were also not immediately helpful; it was not possible to construct an experimental file of known items to test recall, and assessing the indexing precision of existing LC subject headings would be too large a task to undertake at this stage. User effort as a measure is relevant and has been indirectly incorporated into the survey.

At the time of this initial research, some information was available on the online plans of various libraries (2), and since then many other reports have appeared, for example in the Alternative Catalog Newsletter; there is still almost no user evaluation of these systems. The most applicable work was that done at the University of Toronto Robards Library and at the Ohio State University Library. In the process of closing its catalog, Toronto had briefly experimented with an online catalog and had surveyed its users before settling

on a final COM catalog. OSU had taken its circulation system, the Library Control System (LCS), and was modifying it to function as an online public catalog. Reports of both these projects were examined (3), and the author visited OSU to observe its terminal configuration and system operation. Particularly interesting were the preliminary results of a survey conducted at OSU. A questionnaire was administered to 304 users of the LCS over three academic quarters. For example, students were asked why they used terminals, how long they had known about the system, how they had learned to use it, what kind of searches they performed, and so forth. Most respondents learned from library staff or a printed handout, and the vast majority found it easy to use even though few had used any other terminal system previously. Although 60% of the respondents preferred using LCS to the card catalog, only 32% felt it could replace the card catalog. The LCS was more limited at that time than SCORPIO, not providing subject access, but the kinds of questions being asked directly paralleled much of what we wanted to know about SCORPIO.

Scattered statistics and studies from within LC were pulled together to provide background for the survey. Studies of SCORPIO had been undertaken by CRS as part of broader evaluations of its total information service (4). A few articles about SCORPIO have appeared in the library literature, but these have concentrated on its role in providing information to the Congress and on technical aspects of the system design (5). Other supporting reports included a brief assessment of the Science Reading Room terminal experiment, based on user comments in a log-book and machine-generated tallies of searches (6); forecasts of automated catalog development at LC (7); portions of a general reader survey carried out in April 1976 by the Librarian's Task Force on Goals, Organization, and Planning (8); proposed policy statements on public terminal use

from an interdepartmental commiteee convened shortly after the CCC first opened. These, together with an early plan for a user survey that had not been implemented, all stressed the need for more detailed evaluation.

Various statistics on SCORPIO services were available. CCC staff kept records of the number of questions they were asked, reflecting only staff interactions and not the actual number of terminal users. ASO produced machine-generated tallies of the total number of transactions per file, the number of commands and errors made (an average of 15 commands and .62 errors per search), and the average length of searches (11-15 minutes). However, one user may make several searches at one sitting, and ASO figures did not give information on how people were using SCORPIO, what they were finding and not finding, and which steps in the search procedure caused problems.

The preliminary proposal for the survey was submitted with the intent to survey both users and non-users in all areas where public terminals were located. Since specific performance criteria did not exist for SCORPIO public services, or other similar online catalogs, the project would not constitute an evaluation in the strictest sense, but rather an informal attempt to characterize the users and determine their understanding of and problems with the system. This pilot study could point the way toward a more comprehensive investigation.

Methodology

The development of the survey instrument and sampling methodology presumed that this would not be a highly-controlled experimental situation, but a loosely-defined population being examined amidst many constraints on the survey process. The final questionnaire comprised 38 questions, 36 of which were some form of closed-end, multiple-choice question. The questionnnaire was printed as

printed as a twelve-page booklet, including a back page for user comments. A statistical consultant advised on the questionnaire construction and sampling technique. A copy of the questionnaire, indicating the responses, follows this paper.

It was difficult to decide on an effective method of distribution because of the physical arrangement of the terminals and the staffing patterns in the reading rooms. Both the terminals and the card catalog stretch across three rooms with several entrances, and reference staff rotate during the day among four different stations. It was not possible to control many different areas at once or to canvass the rooms to identify recipients of the non-user survey. Consequently, although alternative methods were considered, the non-user portion of the survey was postponed until a full test had been made of the user questionnaire and survey methods.

Since users are not required to sign in at the CCC, we did not have an exact count of the population; however, we did have the reference and ASO statistics mentioned earlier. Using these for the same month one year prior to the planned test period, we estimated the number of persons who might use the CCC during any one day or series of days. The availability of these statistics, and the layout of the CCC, where users must pass the librarian's desk on their way to a terminal, led us to further restrict this phase of the survey to the six terminals in that area. We decided to sample rather than survey the entire population, and to distribute the questionnaire at specified but varying times of day for two weeks, causing as little disruption as possible to users and to reference staff.

Survey implementation

The survey test period was from May 14 through May 27, 1979, including

evenings and weekends. The sampling schedule broke the day (8:30 a.m. to 9:30 p.m.) into nine periods of one or one and a half hours. Questionnaires were distributed every third period, changing the pattern of distribution each day. To determine the total population, a roster was kept at the librarian's desk at the CCC with pages corresponding to the sampling periods. All arriving users signed in on numbered lines; if they came during a survey period, they were handed a questionnaire coded to the roster page, implicitly representing the time and date. Users who first signed in during a non-survey period and then either stayed through or later returned during a survey period were not given questionnaires; each user had only one chance to be surveyed during the two-week period. This method placed the emphasis on the number of persons and not the number of machine transactions; it also did not give heavier weight to those who used SCORPIO more often. Although we expected concern about the respondents' anonymity since the questionnaires were linked to the rosters, there were no complaints during the course of the survey.

The final sample numbered 148, which was about 30% of the total two-week CCC population of 493. 123 questionnaires were returned, giving a return rate of 85%. Users were asked to return the form to the librarian at the CCC, and most tended to fill it out as they searched. Postage-free mailing labels were provided for those who could not complete the questionnaire on the spot. The roster was checked off as the surveys came in, and some telephone follow-ups were made to request that questionnaires be returned.

Data analysis

As the answers were coded, errors, omissions, and misinterpretations were noted for future revision of the questionnaire. No questionnaires were totally rejected, although specific answers were occasionally invalidated.

Written comments were transcribed and sorted into categories. The data were keypunched in a fixed format, and a simple Statistical Package for the Social Sciences (SPSS) program was used to compute the frequencies and to cross-tabulate some of the questions.

Based on the number of questionnaires returned and the percentage of the users represented thereby, a rough calculation was made of an overall sampling error of ±6.6%, with a confidence interval of 95%. This assumes a completely random sample; for the "clustering" technique used in this survey a complicated and precise error formula was derived and could be used in a more extensive study. The sampling error present in cross-tabulations, where a smaller number of cases are being examined, is much higher. There is also an unknown amount of error resulting from the questionnaire content and its administration. These considerations limit any inferences drawn from the surevey results.

Results

The survey showed that users like SCORPIO and hope it will do more for them in the future. Despite variances and biases of the survey, it at least helps us understand our public. Grouping the questions into related areas provides analyses of 1) general population characteristics, 2) the SCORPIO user environment at LC, 3) instructional effectiveness, and 4) purposes and comparisons of SCORPIO and card catalog usage. Percentages quoted represent the proportion of the total number of cases (i.e., the percent of 123), not of the total number of responses to any one question (which may number less than 123); figures do not always add to 100% because of non-responses or situations where users could pick more than one answer.

1) Population characteristics

One quarter of the respondents were at LC for the first time, as opposed to those who use LC several times a week (21%), several times a month (23%), or only occasionally (30%). When asked about SCORPIO use, 43% indicated they had just learned to use it and 48% had been using it for one to four months or longer. The sample was thus roughly divided in half between new and experienced users of the computer system. From the list of possible affiliations, the two categories most often checked were students, either undergraduate or graduate/professional school (20% each). The other significant grouping with three categories representing the general adult public: author/private researcher, doing professional or work-related research, and doing personal or non-work research (about 14 people each). Other users included faculty, Congressional and LC staff, and federal government employees. Two-thirds of the users were from the Washington metropolitan area. Although respondents were asked to write in the subject of their research, this was not coded because of the inconsistency of the types of answers given.

Most users (64%) found out about SCORPIO simply by seeing it in the Library; 25% heard about it from a friend or colleague. Only nine people had been referred by a librarian at LC. A fourth of the respondents had previously used other information retrieval systems. Among experienced users, eight people used terminals at least once a day, 12 at least once a week, and 19 at least once a month. About 24% used terminals infrequently or sporadically. In relation to demand for printers, perceived by reference staff to be quite high, only ten people indicated that they used printers every time they used SCORPIO. Another 30% used printers often or sometimes; 22% had never used a printer and the remainder were new to the system.

2) SCORPIO user environment

Indicating all the terminal locations they preferred, 22% of the respondents checked the CCC as the spot they usually went to for terminals. Thirty-four percent (the largest single group) said they used terminals wherever it was convenient for their work.

Only 11 respondents said that they had had to wait to use a terminal on the day of the survey; of those, nine waited less than five minutes. However, only 20 users had never had to wait for a terminal, and 70% of those who were not new users had had to wait sometimes. Of those who used printers on the day of the survey, 65% did not have to wait. Comparable to straight terminal use, about 62% of printer users had to wait sometimes, and only 16% had never had to wait. The question on queuing did not distinguish among different library locations; however, when asked where they would like to see more terminals installed, 37% (a plurality) said that more were needed but that it didn't matter where.

In an effort to equalize access for all users, different time limits for SCORPIO use were proposed on the questionnaire. While 35% of the respondents favored a flat 30-minute limit on terminal use, 42% favored having a five-minute "express" terminal and other terminals with a 30 or 45 minute limit. For printers, a 15-minute and a 30-minute limit were each preferred by about 30% of the users, as opposed to a limit based on the number of pages or citations printed. Only 5 users felt there should be no limits at all. At present there is an informal 30-minute limit on SCORPIO use, which may be extended if no one else is waiting. Some users will search different topics for an hour or longer. Time limits may be necessary in the future, and the users appear to support this.

3) Instructional effectiveness

Several approaches to user education have coexisted at the CCC and in other reading rooms: one-to-one instruction, flip-charts, brief cards, and wall posters. In some cases special sessions are arranged for small groups, and audio-visual materials have also been proposed. Congressional and LC staff receive training separately from the public.

Roughly half of the respondents first learned to use SCORPIO from a librarian at the CCC. Another 25% said they used the flip-chart beside the terminal, but as this chart is also used by librarians in demonstrating to users, a portion of that 25% could have been working with reference staff and not exclusively with the chart. Other sources of instruction, including friends, brief cards, in-house training, and non-CCC librarians, did not represent very large numbers of users. When asked whether it was easy or hard to learn to use SCORPIO, only seven people checked hard. Fifty-seven percent checked easy, and 37% felt it was neither hard nor easy. Among new or experienced users, or different categories of users, there was little variation in this opinion. Despite these encouraging answers, 85% of all respondents felt they could benefit from additional training or written material.

Considering a list of factors involved in using SCORPIO, respondents rated each as easy, medium, or hard to learn. Deciding which command to use, and inserting correct spacing and punctuation caused the fewest problems, with 65 to 68% of users rating these easy. To get the correct order and format of commands and to understand the printed instructions was considered easy by 50 to 55% and medium by 35 to 39%. Although specifying subject headings and understanding computer messages also received about a 50% easy rating, these two had noticeably higher hard ratings (12%) than the other factors noted above. By far the most

difficult factor was "figuring out what to do when problems occur"; only 17% rated this easy, 37% medium, and 41% hard. Gaps in instructional materials and ambiguous system messages both contribute to this frustration. There is not at present a "help" feature on SCORPIO that aids the user in going to the next step.

Another question listed options that could improve instruction, with choices of yes, no, or maybe for each. The strongest preference (64%) was for computer-assisted or online instruction; 61% answered yes for take-home manuals, and 57% felt more complete instructions and messages displayed by SCORPIO would have helped. The least favored option was group instruction, which 58% felt would not have helped; only 16 people checked yes. Users showed no marked feeling on having more assistance from library staff, and only a slightly more positive reaction to having more detailed manuals beside the terminals (48% yes, 25% maybe, 20% no). The idea of slide shows or other audio-visual media was also received rather ambivalently. Choices in this question were not much affected by the way in which users had first learned, except that those who learned from a friend had a predictably greater desire for more help.

Assessing the effect of physical features of SCORPIO hardware showed that users have very little difficulty with the Sycor terminals and Tally printers most commonly found in reading rooms. Among factors such as keyboard layout, screen brightness, character size, and printer operation, the latter was the only one that caused problems. The procedure for resetting the printer margins, which must be followed every time the computer has been "down" or the terminal power turned off, is confusing. One exception to the general ease of operating terminals was in understanding the function of some switches and keys; 37% of the users felt this was hard, three times as many as for any other factor.

Many control buttons are in fact not ever used in searching by the general public, but their presence may be disconcerting.

With many automated literature searching systems, users are required to reserve and pay for services. Although this is not true at LC now, further demands on and expansions of computer services might necessitate a consideration of such policies. When asked whether it would help to reserve facilities, users were not certain: for SCORPIO instruction, 38% said no, 42% yes; for terminal use, 42% said no, 42% yes; for printer use, 37% said no, 45% yes; for consulting with a librarian who would do the search for the user, 48% no and 36% yes. Long-term users were more willing to reserve for instruction, but not to use terminals or printers, and were more strongly against having staff search for them. These answers, together with the preferences for instructional methods, reflect a "hands off" attitude among the respondents, who seem to desire self-sufficiency and to want to avoid dependency on the library staff.

The responses were only slightly more definite on the question of paying for services. Although actual fees were not quoted, users indicated a willingness to pay for offline prints (58% yes, 30% no) and local terminal printing (56% yes, 34% no). Those who used the printers most often were not necessarily more willing to pay. Respondents were evenly split on the question of paying to have librarians do searches or of purchasing instructional manuals, even though they want more of such manuals. Patrons who had experience with other information retrieval systems were more likely to accept paying a librarian to do searches, but otherwise their use patterns were not significantly different. One user wrote that requiring reservations could lead to problems with "no-shows," uneven scheduling, and discrimination against

new and/or hurried users. Another "taxpayer" added that as many services as possible should be charged for on an individual basis.

4) Access points: SCORPIO and the card catalog

The last portion of the questionnaire inquired into purposes for and approaches to SCORPIO and card catalog usage. The most frequent general purpose for using SCORPIO was "to scan the available literature," an option circled by 53% of the respondents. "Preparing an extensive bibliography" and "selecting a few good items" were each circled by about 27% of the users, who could choose as many options as were applicable. Other uses included checking legislative information or just familiarizing oneself with the system. In identifying more precisely the types of information sought, we found the outstanding category, circled by 76% of the respondents, to be "what books LC has on a particular subject." Even graduate students and faculty showed this high percentage of subject searching, which contrasts with findings from other catalog use studies (see table). LC's closed stacks may account for part of this, as researchers must do their browsing through catalogs and not proceed directly to the shelves. Other factors might be the novelty of SCORPIO and the expectation that a large research facility like LC might have items unknown to a patron. The next largest categories were searching by author, circled by 37%, and checking call numbers for specific items (33%). After the projected freezing of the card catalog we expect to have heavy demand for quick call-number identification, especially once we are fully dependent on the LOCIS and have no manual backup such as the planned "add-on" card catalog.

In their most recent search on SCORPIO, 23% of the people had used personal names as an access point, 27% used titles, and 69% used subjects. Of those who used subjects, 73% browsed randomly under some word, 5% consulted

CROSS-TABULATION OF QUESTION 12, TYPE OF USER, BY QUESTIONS 28 AND 29, TYPES AND PURPOSES OF SEARCHES

| Search type ↓ / Category → | Undergrad | PostGrad | Faculty | Congr. | Gov't | LC | Priv. res. | Work rel. | Personal | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|
| 28-1, extens. bibliog. | 12 (48%) | 9 37.5% | 3 37.5% | 1 25% | 4 36.3% | 0 | 3 18.7% | 1 6% | 1 7.6% | 34 |
| 28-2, select few items | 7 28% | 5 20.8% | 2 25% | 0 | 2 18.1% | 3 75% | 5 31.2% | 3 20% | 7 53.8% | 34 |
| 28-3, scan literature | 15 60% | 15 62.5% | 5 62.5% | 3 75% | 5 45.4% | 1 25% | 9 56.2% | 6 40% | 4 30.7% | 63 |
| 28-4, check facts | 6 24% | 3 12.5% | 0 | 0 | 1 9% | 0 | 1 6% | 5 33% | 2 15.3% | 18 |
| 28-5, other | 1 4% | 2 8.3% | 1 12.5% | 0 | 3 27.2% | 0 | 4 25% | 1 6% | 3 23% | 15 |
| 29-1, books ( author | 10 40% | 10 41.6% | 5 62.5% | 3 75% | 1 9% | 1 25% | 7 43.7% | 4 26.6% | 3 23% | 44 |
| 29-2, books by subject | 19 76% | 21 87.5% | 7 87.5% | 4 100% | 7 63.6% | 3 75% | 12 75% | 8 53.3% | 10 76.9% | 91 |
| 29-3, pdcl. articles | 10 40% | 10 41.6 | 2 25% | 3 75% | 1 9% | 0 | 6 37.5% | 1 6% | 1 7.6% | 34 |
| 29-4, identify names | 6 24% | 7 29.1 | 2 25% | 2 50% | 2 18.1% | 1 25% | 4 25% | 3 20% | 2 15.3% | 29 |
| 29-5, books by title | 5 20% | 11 45.8 | 4 50% | 1 25% | 3 27.2% | 1 25% | 5 31.2% | 3 20% | 2 15.3% | 35 |
| 29-6, identify call numbers | 10 40% | 7 29.1 | 4 50% | 2 50% | 3 27.2% | 2 50% | 6 37.5% | 2 13.3% | 2 15.3% | 38 |
| 29-7, legisl. info | 6 24% | 6 25% | 1 12.5% | 3 75% | 1 9% | 0 | 3 18.7% | 3 20% | 0 | 23 |
| 29-8, names of orgs. | 5 20% | 2 8.3% | 0 | 3 75% | 1 9% | 0 | 3 18.7% | 2 13.3% | 0 | 16 |
| TOTAL PERSONS IN CATEGORY | 25 | 24 | 8 | 4 | 11 | 4 | 16 | 15 | 13 | 120 |

(Percentages are by column, i.e., the percentage of that category of person. For row percentages, see main questionnaire results.)

the LC Subject Headings list which is kept near the terminals and catalogs, and 11% used LC classification numbers. Difficulty in making effective use of subject headings was noted earlier as a problem. Although this is not unique to automated systems, it requires more attention in SCORPIO than in the card catalog since subject authority records are not yet online to the public. The lack of a cross-reference structure may go unnoticed as users browse unused terms or perhaps find only title entries.

SCORPIO displays records in card (or accession) number order, not alphabetically. Eighty-three percent of the users felt this was satisfactory. When asked to consider other sort options, there was a slight preference for reverse chronological order, rated as better by 31% of the respondents. Alphabetical order by title was rated as better by 15% and as the same by 46%; alphabetical by author was rated as better by 22% and as the same by 43%. One user suggested a capability for choosing any sort order appropriate, and a Library committee is currently studying this possibility.

Users who could not find what they wanted after an initial SCORPIO search took different steps. The two most popular alternatives of those listed in the question were trying a different search term on SCORPIO and going to the card catalog, each chosen by about half of the survey population. Consulting the librarian on duty at the CCC was chosen by 28%, and 25% went to printed indexes and bibliographies. Trying another data base was considered by 20% of the users. Users could check as many steps as they wanted, although there was no way for them to indicate the order in which these steps might be taken.

Analyzing the approaches patrons take to SCORPIO and the card catalog is affected by the coverage of the two tools. Thirty-seven percent of the

respondents were looking for materials published after 1969, the approximate cut-off date for inclusion in the LCCC. Only 12 people were interested exclusively in items published before 1969 (most such users would not have been in the survey population), and 51% were using materials covering all dates. About half the respondents had used the card catalog in addition to SCORPIO on the day of the survey. Of those who used the cards, 62% were looking by subject, 50% by author, and 40% by title. One-third of the users who only need post-1969 materials used the card catalog even though they were also using SCORPIO.

The questionnaire attempted to compare the ease of certain search operations between SCORPIO and the card catalog. Many people left the rather long question blank, or misunderstood it, so the data are quite unreliable. Most users tended to rate SCORPIO as easier than the card catalog for everything, even when the option given was not available on SCORPIO, such as finding cross-references.

The last two questions addressed a crucial issue: whether SCORPIO could replace the card catalog for the user's present purposes. The respondents as a whole were divided 50/50, but 70% of those who had used the cards that day answered negatively. Surprisingly, only two-thirds of those using exclusively pre-1969 materials said that SCORPIO could not replace the cards. The remaining one-third may not have understood the question or the limitations of LCCC. As expected, those users interested in recent materials, legislative information, and organizational resources all supported SCORPIO as a complete replacement. The two reasons most often cited for not moving to SCORPIO were lack of periodical titles and of items cataloged before 1969, mentioned by 46% and 68% respectively of the users against replacing the cards. Other factors were the absence of various languages and formats, and the inconvenience of

waiting for terminals. These factors may all be resolved through hardware additions, intensive programming work in progress, and long-term projects such as the tapes under production by the Carrollton Press, which will furnish us with retrospective records. Difficulty in learning to use SCORPIO was the least important reason, cited by only seven people who did not want it to replace the card catalog.

5) User comments

The last page of the questionnaire invited user comments about SCORPIO and LC services overall. These remarks generally fell into the areas of instructional problems, the scope and coverage of the files, and complimentary remarks about the system. There was only one outright negative assessment of LC among the entire survey population.

Users asked for coverage of pre-1969 materials, and some mentioned the awkwardness of having to check two sources for a thorough search. Others felt the most useful thing would be to allow remote access to LOCIS from other libraries, and to tie in with other national libraries in one large data base. It is interesting to see user support for the networking activities which have been pursued nationally and internationally. Other suggestions included entering music, New Serial Titles, National Register of Microform Masters, and similar cataloging/locational publications.

Users revealed problems with instruction both directly, by asking for more documentation, and indirectly, by complaining about difficulties that could have been resolved had they asked a librarian or read existing documentation. Some users felt the flip-charts were too detailed while others felt they were not comprehensive enough.

There were many brief complimentary remarks. The staff were commended for their assistance, and people were grateful for the SCORPIO resources. One user wrote, "This is the best use of my tax money I have come across in Washington."

Problems and future plans

In the description of the survey methodology, some restrictions and compromises were outlined. Some of these could be overcome in future studies. The instrument itself was lengthy, causing respondents to skip questions or answer hurriedly. The distribution process was cumbersome, particularly the sign-in procedure. The survey was not unobtrusive, and may reflect a bias from a self-selected population. In expanding the survey to cover other terminal areas, a more efficient and less confusing technique would be needed to count the total population, draw a sample, and code questionnaires. In so doing, and by moving the survey dates closer to peak use periods, a larger sample could be drawn, the error reduced, and broader conclusions reached. However, such techniques might require greater staff time and more disruption of the user.

The lack of non-user data leaves many questions unanswered, and these data must be gathered if we are to fully understand problems with and resistance to LOCIS. Non-users could be identified and interviewed about their impressions of the computer system: are they aware of its existence and functions, what are some reasons they have not used it, and so forth.

SCORPIO does not exist in a vacuum, and usage characteristics of other components of LOCIS should be taken into account. MUMS (Multiple-Use MARC System) was initially developed for technical services but further development of its retrieval capabilities has greatly enhanced its usefulness for reference purposes. Its indexes are generally more current than those of SCORPIO and

incorporate corrections to records. It also provides access to serials, maps, in-process, and name authority records, in addition to those for books. It is used regularly by public service staff and we are now instructing patrons in its use. Future surveys might examine its use patterns as opposed to SCORPIO's, and may help our continuing work to integrate our systems. A recurring online survey might be an effective way to progressively monitor computer use, randomly generating screens of questions on designated terminals and automatically linking the user's answers with machine tallies of commands entered, file use, time of day, and so forth. Questions could be varied according to terminal location, study requirements, and systems a and the responses processed continuously, with current profiles available when needed.

Conclusions

This study was a successful first attempt at surveying SCORPIO use. The problems identified by patrons coincided with those observed by staff, and we have also been reassured on many points. Many different kinds of people use our computer catalog without great difficulty and they seem to have confidence in the system. Although the LOCIS is working well, we must direct attention to areas that can be improved, such as clarifying system messages and planning an online tutorial program. Priorities exist within LC for these elements; the Committee on Automation Planning and the Advisory Group on the Future of LC Retrieval Systems are among the mechanisms used to analyze automation needs and to facilitate library-wide input.

The LOCIS is an integral part of reference services at LC for both Congress and the public. This survey shows the overall positive response of the public and has opened other avenues for inquiry. For example, we could examine more closely the steps in the user's search process and how it is helped

or hindered by the software. It would be interesting to know how much use even experienced patrons make of sophisticated commands such as limiting and combining sets, and whether this is enough to justify the effort spent in developing these features. Controlled test populations and test data bases could facilitate more critical comparisons between different online systems and between online and card catalogs. Physical and pyschological aspects of terminal use, user expectations of online systems, and other human factors considerations will become increasingly important as we depend more on automation. Investigation into methodological improvements will benefit all of these areas. "Use of the catalog to study itself," as discussed by Phyllis Richmond (9) in relation to machine-readable catalogs, has great potential for public service as well as technical processing. As more libraries establish and evaluate similar online systems, information on their use can be synthesized to enhance planning and standards development, and to contribute to the growth of knowledge in this field.

---

I wish to acknowledge the invaluable assistance of Daniel Melnick of the Congressional Research Service in the development of the survey methodology, and of Nick Schweitzer of CRS and Maurice Sanders of the Collections Management Division in the programming analysis.

References


1. Hafter, Ruth. "The Performance of Card Catalogs: A Review of the Research," Library Research 1:199-222 (Fall 1979).

2. Bierman, Kenneth J. "Automated Alternatives towCard Catalogs: The Current State of Planning and Implementation, " Journal of Library Automation 8:277-298 (Dec. 1975).

3. For the University of Toronto, see: Blackburn, Robert H. "Two Years with a Closed Catalog," in Freezing Card Catalogs (Washington, D.C.: Association of Research Libraries, 1978), and also Weiss, Carole, "Card Catalog to Online Catalog: The Transitional Process," University of Toronto, 1977.

   For the Ohio State University, see: Herndon, Gail A., and Noelle van Pulis, "The Online Library: Problems and Prospects for User Education," in New Horizons for Academic Libraries, ed. Robert D. Stueart and Richard D. Johnson (New York: K.H. Saur, 1979); Hoadley, Irene B., and A. Robert Thorson, An Automated Online Circulation System: Evaluation, Development, Use (Columbus, Ohio: Ohio State University Libraries, 1973); Spaith, Rose, "The OSU Libraries LCS User Survey Study," unpublished notes and personal communications.

4. Congressional Research Service studies:
   Information Support for the U.S. Senate: A Survey of Computerized CRS Resources and Services. Prepared for the Subcommittee on Computer Services of the Committee on Rules and Administration, U.S. Senate by the Science Policy Research Division (Washington, D.C.: Government Printing Office, 1977).

   Library of Congress Information Resources and Services for the U.S. House of Representatives. A report prepared for the Ad Hoc Sub-Committee on Computers of the Committee on House Administration. (Washington, D.C.: Government Printing Office, 1976).

   McKinsey and Company, Inc. Evaluating the Legislative Documentation System. (Washington, D.C.: The Company, 1977).

5. For articles on SCORPIO, see: Chartrand, Robert I., The Legislator as User of Information Technology, ED-167171 (Educational Resources Information Center, 1977); Loo, Shirley, and Bruce E. Langdon, "Selective Dissemination of Information to Congress: The Congressional Research Services SDI Service," Library Resources and Technical Services 19:380-388 (Fall, 1975); Power, D. Lee, Charlene A. Woody, Francis Scott, and Michael P. Fitzgerald, "SCORPIO, A Subject-Content Oriented Retriever for Processing Information On-Line," Special Libraries 67 (July, 1976); Woody, Charlene A., Michael P. Fitzgerald, Francis J. Scott, and D. Lee Power, "A Subject-Content Oriented Retriever for Processing Information On-line (SCORPIO)," AFIPS Conference Proceedings 46:449-454 (National Computer Conference, June, 1977).

6. Phillips, Myron W. Memorandum to James R. Trew, Science and Technology Division, Library of Congress, dated November 17, 1975.

7. Rather, John C. "The Future of Catalog Control in the Library of Congress," in The Future of Card Catalogs. Washington, D.C.: Association of Research Libraries, 1975.

8. Zich, Robert. Library of Congress Reader Survey, July, 1976. Unpublished documents from the Librarian's Task Force on Goals, Organization, and Planning.

9. Richmond, Phyllis A. "Research Possibilities in the Machine-Readable Catalog: Use of the Catalog to Study Itself," Journal of Academic Librarianship 2:224-229 (Nov. 1976).

APPENDIX 3

QUESTIONS LC MIGHT WISH ANSWERED IN AN ONLINE CATALOG USER SURVEY

I. What stops users from getting what they seek out of the online catalog?

A. Physical setting factors

1. Are furniture, light, work space, location, and access satisfactory?

B. Queuing factors

1. How long do users have to wait for a terminal?
2. Do they know alternate locations?
3. Are there special queuing problems in connection with terminals that have printers?

C. Terminal factors

1. Can the user easily learn to operate the terminals?
2. Are the terminals efficiently designed as regards keyboards, special purpose keys, etc?
3. Are the keys clearly and understandably labeled? Do the labels correspond to the instructional aids and system messages? Do the special purpose keys cause confusion?
4. Do poor typing skills cause users a serious problem?

D. Printed Aid factors

1. Are the printed aids clear and pertinent? Too brief/extensive? Too complicated?
2. Should users be able to borrow them? Buy them?
3. Are they conveniently available? By all terminals?
4. Which forms of printed aids do people prefer?

E. Staff assistance factors

1. Is staff available during all open hours?
2. Can the staff efficiently teach the system effectively in the current set up? How long does it take users to learn the system?
3. Is staff conveniently located for user training and consultation?
4. Does assistance consist of tutorials, classes, availability for questions as they arise?
5. How much need for non-computer reference arises? How does computer staffing relate to reference service as a whole?
6. What forms of assistance do users want from the staff? Classes? Ad hoc assistance?

F. User question factors

1. Has the user formulated his query clearly and specifically?

F. (cont'd)

2. Is the system capable of helping the user do so?
3. Is the query within the scope of the system? Are the users expectations unrealistic?
4. What does the user expect/not expect from the system in general?
5. How has the reader conceptualized the information need and then translated it into system terms? Can the question be translated into an effective system search?
6. How many steps does a user go through in the whole process of refining a search request (from very beginning to results).

G. Strategy factors

1. How much does the user need to know about the system?
2. Does a user understand the logic of what the machine can do? Boolean logic, etc? Does the user know what index browsing is? How often are the machines various capabilities used? How often should they be used?
3. What do users do when an initial strategy results in: zero sets? monster sets? Some relevant hits but probably not all?
4. Can, and how do, users narrow or expand their search strategy?

H. Search result factors

1. By what standards do users typically judge the success of their searches for
   a. authors
   b. titles
   c. subjects
2. How accurate are users' assessments of their own results by objective standards?

I. User knowledge factors

1. Does the user understand about file coverage?
2. Does a reader understand what is in a record? What "fields" are and what is in them?
3. What elements does the user feel are important? (implications for minimal cataloging, brief formats, etc)
4. Does the user understand about searchable indexes (i.e., available search categories or terms)? Filing arrangement? How to browse by class #?
5. Does a reader know what subject headings are and how they represent something special, e.g., in a component word search? How they are applied to books and how that affects searching?
6. What do people expect subject headings to be?
7. What do users understand of subject and name control? Thesauri?
8. What is the distribution of author/title/subject searches? Which are discrete and which part of a mosaic of searches?

J. Command factors

1. Does the reader understand the "grammar" of the system? Cursor location, punctuation, spacing, etc?
2. Does the user understand the "substance" of the command system? Are the commands logical and consistant to the user? What does a user stumble on? Forget?
3. How much do users use advanced commands (LIMT, COMB, KEEP, RETR, etc.)?
4. At what point does a user's knowledge of the search sequence and search options break down?

K. Index factors

1. How serious are typographical errors in the index? Other anomalies? How much difficulty is caused by the way the indexes file government agency and corporate headings?
2. Would users prefer divided indexes?

L. Assistance display factors

1. Does the reader know what assistance is available online? In the library as a whole?
2. Does the reader have problems calling up the assistance? Understanding it?
3. Is assistance offered without having to ask the system (i.e., "if you need help!!")?
4. At what point in a search would assistance be most helpful?

M. Message factors

1. Does the user understand the message? Know what to do next?
2. Are the messages consistent, as between files and systems? If not, does the inconsistency cause a problem?
3. Do the messages refer to further sources of assistance (either on the system or other, e.g., "ask a reference librarian, call the hotline.")?

N. Record display factors

1. Can the reader call up the form of display most suited to his need? Can the order of displays be changed? Should it be able to be changed?
2. Is the display clear and attractive? Can the reader quickly and accurately identify the needed data?
3. How many displays is the reader aware of? How often are long displays used and why? How often should they be used?

O. Response time factors

1. What are user expectations for response time?
2. Is the reader confused by too fast response times?
3. What harm is done by long response time?
4. Can the user tell when the system is down as opposed to when it is just slow?

P. System downtime factors

1. What does a user do during downtime?
2. Does the system go down and come up in ways that minimally inconvenience the user?
3. What effect does the unpredictable length of outages have? Do users leave, come back, lose sets?

II. What keeps a non-user from becoming a user?

A. User's attitude factors

1. Is the non-user prejudiced against the system? Has he ever tried it? Other systems?
2. Is the non-user afraid of embarrassing himself? Shy? Not wanting to have to ask a librarian in order to learn?
3. Does the non-user trust the computer to give accurate and complete information? What does he think the system can do?
4. Is the non-user aware of the systems' existence and capabilities?
5. Is the non-user afraid of "breaking" a terminal? Hurting the system? Afraid of typing?
6. What are the problems encountered by non-English or foreign language speakers?

B.System and data base factors

1. Is the system too hard to learn? Down too much? Too frustrating?
2. Does the non-user think he won't get what he needs from the system? The file is too small? Doesn't work for other reasons?
3. Is the coverage too restrictive? Need more languages, formats, etc?

C. Aid factors

1. Are there too few librarians? Printed aids?
2. What aids, if any, would entice the non-user into becoming a user?

D. Physical setting and terminal factors

1. Is the terminal area offputting? Not private enough? Too noisy?
2. Are there enough terminals? The right kind of terminals?
3. Is the non-user inhibited by poor typing skills, or by a perception that such skills are necessary?

NOTE: For management and analysis purposes, other information should be secured, e.g. demographics. Do different groups have different problems? Should different groups be handled in different ways?

APPENDIX 4

TERMINAL USE INTERVIEW QUESTIONNAIRE

1. What was your purpose in using the computer catalog today? (Prompt: What were you looking for?)

2. How were you looking for the material? (Prompt: by title, author, call number, subject heading?)

3. What are the advantages of using the computer catalog to look for things in in the library?

   (Prompt: Any other advantages?)

4. What are the disadvantages or problems in using the computer catalog?

   (Prompt: Any other problems besides those?)

5. How often do you use the computer catalog, on an average? _____

6. When did you first learn to use the computer catalogs? _____

7. How did you learn to use the system? _____
   (Prompt: on your own, through a reference librarian, a training session, a friend?)

8. How do you think you could have better learned to use the system?

   (Prompt: more quickly or easily or more completely)

9. Do you think the computer catalog is easy or difficult to use?

   How is it easy?

   How is it difficult?

**********

Location:_____ Date:_____ Time:_____ No:_____

Terminal Use Interview Results

| | |
|---|---|
| 1. | |
| research for paper/personal writing/book/dissertation | 8 |
| to prepare bibliographies | 5 |
| to find specific information | 5 |
| work | 4 |
| literature search | 2 |
| Library Science assignment | 1 |
| periodical search | 1 |
| to teach myself files I don't know | 1 |
| 2. | |
| subject | 16 |
| title | 7 |
| author | 6 |
| author/title | 2 |
| field searches | 1 |
| company | 1 |
| 3. | |
| speed/quick/fast | 19 |
| convenient | 10 |
| printout | 7 |
| gives broad view | 7 |
| up to date/more up to date/card catalog frozen | 7 |
| easier than card catalog | 2 |
| can use boolean logic | 2 |
| only way I know how to find it (material desired) | 1 |
| is reliable | 1 |
| has greater subject cross references | 1 |
| can browse call # | 1 |
| can do component word searches (MUMS) | 1 |
| is easier to read than catalog cards | 1 |
| is more direct | 1 |
| can find search history | 1 |
| can find which books are in LC's collections | 1 |
| 4. | |
| not retrospective | 6 |
| need to know how to use it/need to know proper commands | 4 |
| none | 3 |
| down time | 3 |
| display hard to understand | 2 |
| error messages hard to understand | 2 |
| system hard to understand | 2 |
| hard to know all of system | 2 |
| waiting time/terminals inaccessable | 2 |
| unable to print part of screen | 1 |
| periodical list not complete | 1 |
| commands hard to understand | 1 |
| not enough detail in displays | 1 |

4. (cont'd)

| | |
|---|---|
| hard to figure out appropriate subject headings | 1 |
| need to have training available | 1 |
| need on-line subject headings | 1 |
| no cross references | 1 |
| system is too limited | 1 |
| hard to find some things | 1 |
| takes too much time to perform boolean logic | 1 |
| hard to exhaust all sources | 1 |
| needs to be more up-to-date | 1 |
| hard to narrow search enough | 1 |
| listing not chronological | 1 |
| not enough proofing of files done | 1 |
| foreign languages handled poorly | 1 |
| hard on eyes | 1 |
| instructions poorly written | 1 |
| no key word capability (SCORPIO) | 1 |
| afraid of machines | 1 |

5.

| | |
|---|---|
| first time | 5 |
| second or third time | 3 |
| 3 - 5 times a week | 9 |
| 1 - 2 times a week | 3 |
| once a month | 2 |
| twice a month | 2 |
| once a year | 1 |

6.

| | |
|---|---|
| within past week | 7 |
| within past 6 months | 6 |
| 1 year ago | 2 |
| 2 years ago | 4 |
| 3 years ago | 3 |
| 4 years ago | 1 |
| >10 years ago | 1 |

7.

| | |
|---|---|
| flip charts | 12 |
| reference librarian | 12 |
| friend | 3 |
| read instructions (card attached to terminal) | 2 |
| other staff | 2 |
| class | 1 |

8.

| | |
|---|---|
| no other way | 9 |
| class | 10 |
| brochure to take home | 3 |

8. (cont'd)

| | |
|---|---|
| more sophisticated trainers | 1 |
| audio-visual program | 1 |
| more time with reference librarian | 1 |

9.

| | |
|---|---|
| easy | 23 |
| interviewee used to computers | 4 |
| easy to get what you want once you know machine | 4 |
| commands are straightforward/easy to learn | 4 |
| convenient | 3 |
| just typing/ordinary keyboard | 2 |
| just follow instructions | 2 |
| quick | 1 |
| easy to select and edit data | 1 |
| easily manipulated | 1 |
| easy to correct mistakes | 1 |
| subjects referenced logically | 1 |
| interviewee "just doing easy searches" | 1 |
| difficult | 2 |
| instructions not clear | 1 |
| complex | 1 |
| hard to understand machine | 1 |

APPENDIX 5

CARD CATALOG USE INTERVIEW QUESTIONNAIRE

1. What was your purpose in using the card catalog today? (Prompt: What were you looking for? e.g., an item, a general topic, all works by an author, etc.)

2. How were you looking for the material? (Prompt: by title, author, subject heading?)

3. How often, on an average, do you use the Library of Congress? _____

4. What are the advantages of using the card catalog to look for things in the library?

   (Prompt: Any other advantages?)

5. What are the disadvantages or problems in using the card catalog?

   (Prompt: Any other problems?)

6. Are you familiar with the computer catalog? _____

   6a1. (if yes) How familiar? How did you learn to use it? In your last _____ visits to the library, how much time did you spend using the computer catalog?_____ the card catalog?_____

   6a2. How could the computer catalog be made easier and more attractive to use?

   6b1. (if no) In what, if any, situations could you anticipate using the computer catalog?

   6b2. What kinds of information do you think is in the computer?

   6b3. What sort of training would be most effective/acceptable for you to learn to use the computers?

7. Do you think the computer catalog is/would be easy or difficult to use?

**********

Location:_____ Date:_____ Time:_____ Demographics:_____ No:_____

## Card Catalog Use Interview Questionnaire--Results

| | public non-users | public users | staff users | staff non-users | totals |
|---|---|---|---|---|---|
| **1. What was your purpose in using the card catalog today?** | | | | | |
| general references for a single topic | 49 | 17 | 4 | 2 | 72 |
| specific items--has citations | 7 | 6 | 4 | 2 | 19 |
| works by a specific author | 2 | | 1 | | 3 |
| call numbers for periodicals | | 2 | | | 2 |
| references for several topics | 2 | | | | 2 |
| new accessions by a specific association | 1 | | | | 1 |
| index of book reviews | 1 | | | | 1 |
| **2. How were you looking for the material?** | | | | | |
| subject | 36 | 15 | 6 | 4 | 61 |
| author | 20 | 7 | 7 | 1 | 35 |
| title | 16 | 8 | 5 | | 29 |
| name/family holdings | 5 | | | | 5 |
| location (country/city) | 4 | | | | 4 |
| business directories | 1 | | | | 1 |
| publication index | | 1 | | | 1 |
| reading indexes | | 1 | | | 1 |
| calendar | | 1 | | | 1 |
| **3. How often, on an average, do you use the Library of Congress?** | | | | | |
| daily | 5 | 2 | 6 | 1 | 14 |
| several times per week | 1 | 4 | | 1 | 6 |
| once or twice per week | 13 | 9 | 2 | | 24 |
| once or twice per month | 8 | 1 | 1 | 1 | 11 |
| infrequently/not often | 13 | 9 | | 1 | 23 |
| first visit | 22 | 1 | | | 23 |
| **4. What are the advantages of using the card catalog to look for things in the library?** | | | | | |
| only way to find material/only way I know | 28 | 6 | | 3 | 37 |
| more complete/comprehensive | 11 | 10 | 4 | | 25 |
| easier/faster | 20 | 9 | | 2 | 33 |
| convenient/all in one place | 7 | | 2 | | 9 |
| gives broad view/can leaf through cards | 11 | 6 | | | 17 |
| can't browse stacks | 4 | | | | 4 |
| better for known citation | 3 | | 1 | | 4 |
| includes information about book | 2 | | | | 2 |
| none | | 1 | 1 | | 2 |
| doesn't want to use other catalogs/doesn't like computers | 2 | | | | 2 |

Card Catalog Use Interview Questionnaire--Results
Page 2

| | public non-users | public users | staff users | staff non-users | totals |
|---|---|---|---|---|---|
| 4. (cont'd) | | | | | |
| cross references | 1 | | | | 1 |
| using other catalogs, too | | 1 | | | 1 |
| prefers computer | | 1 | | | 1 |
| computer not adequate | | 1 | | | 1 |
| good subject index | | 1 | | | 1 |
| call number easily located | | | 1 | | 1 |
| more points of access to inaccurate citation | | | | | |
| 5. What are the disadvantages or problems in using the card catalog? | | | | | |
| none | 19 | 7 | | 1 | 27 |
| laborious/takes too long to search | 7 | 5 | 2 | | 14 |
| too many books/too much information | 5 | 4 | | | 9 |
| filing errors | 7 | 7 | 4 | | 18 |
| cards not correct/up to date | 6 | | 2 | 1 | 9 |
| numbers rubbed off cards/old cards hard to read | 3 | | | 1 | 4 |
| card trays too full/makes fingers sore | 2 | 1 | 1 | | 4 |
| doesn't have what looking for | 4 | | | | 4 |
| no subject headings | 2 | | | | 2 |
| material on card limited | | 2 | | | 2 |
| index rules incomprehensible | | 2 | | | 2 |
| have to look in more than 1 place/incomplete | | 1 | | 1 | 2 |
| can't use title of classical works | 1 | | | | 1 |
| had to ask for help | 1 | | | | 1 |
| citations must be perfect | | 1 | | | 1 |
| LC call #'s confusing | | 1 | | | 1 |
| 6a1. How familiar are you with the computer catalogs? | | | | | |
| slightly familiar | | 13 | | | 13 |
| able to do most reasonable searches | | 9 | 4 | | 13 |
| very familiar, able to do complex searches | | 1 | 3 | | 4 |
| 6a1. How did you learn to use the computer catalogs? | | | | | |
| flip charts | | 14 | 1 | | 15 |
| reference librarian | | 8 | 1 | | 9 |
| staff training program | | | 8 | | 8 |
| friend | | 3 | | | 3 |
| intern training program | | 2 | | | 2 |
| 6a1. What proportion of your time is spent on the computer catalogs as compared to time spent on the card catalog? | | | | | |
| 5-10% computer, 90-95% cards | | 10 | 1 | | 11 |
| 20-33% " 67-80% " | | 6 | 1 | | 7 |
| 45-50% " 50-55% " | | 4 | 4 | | 8 |
| 67-80% " 20-33% " | | 1 | 2 | | 3 |
| 90-95% " 5-10% " | | | 1 | | 1 |

| | public non-users | public users | staff users | staff non-users | totals |
|---|---|---|---|---|---|
| 6a2. How could the computer catalog be made easier and more attractive to use? | | | | | |
| make retrospective | | 11 | 2 | | 13 |
| clearer instructions | | 9 | 1 | | 10 |
| clearer commands/messages/displays | | 5 | 2 | | 7 |
| more terminals/more accessible | | 2 | 2 | | 4 |
| less down time | | 1 | 2 | | 3 |
| needs no improvement | | 1 | 1 | | 2 |
| on-line tutorial | | | 1 | | 1 |
| make available to libraries across country | | 1 | | | 1 |
| include foreign language materials | | 1 | | | 1 |
| voice entry | | 1 | | | 1 |
| let more people know about it | | 1 | | | 1 |
| add circulation control/automatic call | | 1 | | | 1 |
| 6b1. In what, if any, situations could you anticipate using the computer catalog? | | | | | |
| don't know | 16 | | | | 16 |
| none/no need/ don't want to | 11 | | | 3 | 14 |
| when have more time to learn/use if knew how | 12 | | | | 12 |
| new subject/unusual topic | 6 | | | | 6 |
| to find material not in card catalog | 8 | | | 1 | 9 |
| large, long-term projects | 4 | | | | 4 |
| general background material | 3 | | | | 3 |
| if printouts necessary | 2 | | | | 2 |
| if systems accessible elsewhere (not at LC) | 1 | | | | 1 |
| for periodicals | 1 | | | | 1 |
| for any search | 1 | | | | 1 |
| 6b2. What kinds of information do you think is in the computer? | | | | | |
| same as card catalog | 25 | | | 1 | 26 |
| don't know | 24 | | | 1 | 25 |
| new books/things not in card catalog | 5 | | | 1 | 6 |
| more up-to-date card catalog | 2 | | | | 2 |
| research material | 2 | | | | 2 |
| subject index/location of subjects | 2 | | | | 2 |
| abstracts | 1 | | | | 1 |
| reviews | 1 | | | | 1 |
| references to legislation | | | | 1 | 1 |
| anything retrievable | 1 | | | | 1 |
| no desire to learn | 1 | | | | 1 |

| | public non-users | public users | staff users | staff non-users | totals |
|---|---|---|---|---|---|
| 6b3. What sort of training would be most effective/acceptable for you to learn to use the computers? | | | | | |
| personal instruction | 42 | | | | 42 |
| clear, simple written instruction | 20 | | | | 20 |
| class instruction with individual help | 3 | | | | 3 |
| not interested | 2 | | | 2 | 4 |
| short, simple instruction sheet to take home | 4 | | | | 4 |
| demonstration | 1 | | | | 1 |
| quick audio-visual program | 1 | | | | 1 |
| 7. Do you think the computer catalog is/would be easy or difficult to use? | | | | | |
| easy | 47 | 22 | 9 | 2 | 80 |
| don't know | 8 | | | 2 | 10 |
| prefer cards | 1 | | | | 1 |
| difficult | 6 | 4 | | | 10 |
| fear computers | 5 | | | | 5 |

Card Catalog Use Interview Questionnaire
sample size=100

public--unfamiliar with computer catalogs = 62
public--familiar with computer catalogs = 25
staff--familiar with computer catalogs = 9
staff--unfamiliar with computer catalogs = 4

APPENDIX 6

PRE-TEST TIME SCHEDULE SHEET

Library of Congress

| WEEK | 1 10/26 - 11/1 | | 2 11/2 - 11/8 | | 3 11/9 - 11/15 | | 4 11/16 - 11/22 | | 5 11/23 - 11/29 | | 6 11/30 - 12/6 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | U | N | U | N | U | N | U | N | U | N | U | N |
| Terminal Location | | | | | | | | | | | | |
| JR | Fr Morn | Sa Morn | Mo Aft | Th Aft | Mo Eve | | Fr Morn | Mo Eve | We Aft | Fr Morn | Th Eve | |
| RR | Tu Morn | Tu Aft | We Aft | | Tu Eve | Th Eve | Tu Morn | Th Morn | Su Aft | | Fr Eve | Su Aft |
| SR | Mo Morn | | Fr Aft | Fr Eve | Fr Eve | Fr Morn | We Morn | | Sa Aft | Mo Aft | Tu Eve | We Eve |

APPENDIX 7

SCHEDULE OF DATA COLLECTION
April 5 - May 30, 1982

| | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | Sunday |
|---|---|---|---|---|---|---|---|
| Week 1 | MRR-A,U | | | MRR-A,U | MRR-M.U<br>MRR-A,N | MRR-A,U | MRR-A,N |
| Week 2 | | MRR-A,N | MRR-A,U | SRR-A,N | MRR-A,U | MRR-M,U | SRR-A,U |
| Week 3 | MRR-A,N | MRR-A,U | | MRR-M,U<br>MRR-A,U | | MRR-A,U | MRR-A,N |
| Week 4 | | | MRR-A,N | MRR-M,N | MRR-M,U<br>MRR-A,U | MRR-M,U | MRR-A,U |
| Week 5 | MRR-A,N | MRR-A,U | JRR-A,U | MRR-M,U | MRR-A,U | MRR-A,N | |
| Week 6 | MRR-A,U | | | MRR-A,N | MRR-A,N | MRR-M,U<br>MRR-A,U | JRR-A,U |
| Week 7 | MRR-A,U | | MRR-A,U | MRR-A,U | MRR-M,N | MRR-A,U | JRR-A,N |
| Week 8 | MRR-A,U | MRR-A,N | MRR-A,N | SRR-M,U | MRR-A,U | | MRR-A,U |

JRR--Thomas Jefferson Reading Room
MRR--Main Reading Room
SRR--Science and Technology Reading Room

M--9:00a.m. - 1:00 p.m.
A--1:00p.m. - 5:00 p.m.

U--user questionnaires distributed
N--non-user questionnaires distributed

## LC Focused Group Interviews
## Draft Schedule

**Monday, May 10**

| | |
|---|---|
| 10:00 | GRR Reader Users |
| 1:30 | CRS Staff Users |
| 3:30 | Visiting Librarians (?) |

**Tuesday, May 11**

| | |
|---|---|
| 8:30 | GRR Staff Users |
| 10:30 | GRR Reader Non-Users |
| 1:00 | Processing Staff Users |
| 3:00 | Special Collection/Area Staff Non-Users |

**Wednesday, May 12**

| | |
|---|---|
| 10:00 | Processing Staff Non-Users (?) |
| 1:00 | Study Facility Users |
| 3:00 | LH & G Reader Non-Users (?) |

**Thursday, May 13**

| | |
|---|---|
| 10:00 | ASO Staff Users |
| 1:00 | Study Facility Reader Non-Users |
| 3:00 | Staff Assistant Non-Users |

**Friday, May 14**

| | |
|---|---|
| 8:30 | CRS Intern Non-Users |
| 1:00 | Sci RR Reader Users |
| 3:00 | Shelf Holder Users |

# Council on Library Resources

# COMPUTER CATALOG STUDY

## User Questionnaire

**PART 1: ABOUT YOUR MOST RECENT SEARCH**

**INSTRUCTIONS:** Please answer these questions about the computer catalog search you just completed.

1. I came to this computer search with:
(Mark ALL that apply)

| | | LC | Agg |
|---|---|---|---|
| a A complete author's name | ○ | 37.0 | 41.9 |
| b Part of an author's name | ○ | 12.1 | 12.7 |
| c A complete title | ○ | 30.5 | 39.3 |
| d Part of a title | ○ | 9.2 | 10.9 |
| e A topic word or words | ○ | 42.3 | 28.7 |
| f A subject heading or headings | ○ | 53.8 | 44.4 |
| g A complete call number | ○ | 2.7 | 5.0 |
| h Part of a call number | ○ | 0.6 | 1.1 |

2. By searching this computer catalog I was trying to find:
(Mark ALL that apply)

| | | LC | Agg |
|---|---|---|---|
| a A specific book, journal or magazine | ○ | 36.9 | 50.1 |
| b Books, journals or magazines on a topic or subject | ○ | 69.1 | 53.4 |
| c Books by a specific author | ○ | 20.7 | 23.6 |
| d Information such as publisher, date, spelling of a name, etc | ○ | 10.2 | 5.3 |
| e If a book that I know the library has is available for my use | ○ | 4.3 | 16.7 |
| f Another library that has a book, journal or magazine that I want | ○ | 1.4 | 7.4 |

3. I searched for what I wanted by:
(Mark ALL that apply)

| | | LC | Agg |
|---|---|---|---|
| a A complete author's name | ○ | 35.8 | 38.0 |
| b Part of an author's name | ○ | 12.0 | 15.0 |
| c A complete title | ○ | 26.3 | 35.5 |
| d Part of a title | ○ | 10.3 | 14.2 |
| e A topic word or words | ○ | 44.9 | 29.9 |
| f A subject heading or headings | ○ | 56.1 | 43.4 |
| g A complete call number | ○ | 2.9 | 4.4 |
| h Part of a call number | ○ | 0.8 | 0.8 |



BEST COPY AVAILABLE

4. I need this information for:
(Mark ALL that apply)

| | LC | Agg |
|---|---|---|
| a Recreational uses | 6.9 | 16.8 |
| b Making or fixing something | 0.8 | 3.2 |
| c My work or job | 42.1 | 16.9 |
| d Personal interest | 19.7 | 29.9 |
| e A hobby | 4.1 | 7.7 |
| f Class or course reading | 15.6 | 28.7 |
| g A course paper or report | 29.2 | 38.6 |
| h A thesis or dissertation | 15.8 | 9.7 |
| i Writing for publication | 21.2 | 7.2 |
| j Teaching or planning a course | 6.8 | 4.6 |
| k Keeping up on a topic or subject | 18.0 | 14.2 |

5. In this computer search I found:
(Mark ONE only)

| | LC | Agg |
|---|---|---|
| a More than I was looking for | 18.3 | 16.6 |
| b All that I was looking for | 19.3 | 27.5 |
| c Some of what I was looking for | 53.8 | 39.6 |
| d Nothing I was looking for | 8.6 | 16.3 |

6. In relation to what I was looking for, this computer search was:
(Mark ONE only)

| | LC | Agg |
|---|---|---|
| a Very satisfactory | 50.1 | 46.5 |
| b Somewhat satisfactory | 37.5 | 33.6 |
| c Somewhat unsatisfactory | 8.3 | 10.4 |
| d Very unsatisfactory | 4.1 | 9.5 |

7. I came across things of interest other than what I was looking for:

| | LC | Agg |
|---|---|---|
| a YES | 64.0 | 49.8 |
| b NO | 36.0 | 50.2 |

8. I got help in doing this computer catalog search from:
(Mark ALL that apply)

| | LC | Agg |
|---|---|---|
| a Printed material or signs | 62.6 | 40.6 |
| b Instructions on the terminal screen | 33.9 | 32.0 |
| c Library staff member | 50.0 | 22.2 |
| d Person nearby | 7.0 | 5.6 |
| e I did not get help | 16.1 | 31.0 |

9. My overall or general attitude toward the computer catalog is:
(Mark ONE only)

| | LC | Agg |
|---|---|---|
| a Very favorable | 77.5 | 67.0 |
| b Somewhat favorable | 18.3 | 25.4 |
| c Somewhat unfavorable | 3.7 | 5.3 |
| d Very unfavorable | 0.6 | 2.3 |

10. Compared to the card, book, or microfiche catalog in this library, the computer catalog is:
(Mark ONE only)

| | LC | Agg |
|---|---|---|
| a Better | 83.9 | 74.5 |
| b About the same | 11.7 | 16.5 |
| c Worse | 4.3 | 9.0 |
| d Can't decide | --missing-- | |



BEST COPY AVAILABLE

**PART 2: YOUR EXPERIENCE WITH COMPUTER CATALOG FEATURES**

**INSTRUCTIONS:** Mark the single column for each question that corresponds most closely to how you feel. If the statement does not apply to your experience at the computer catalog, mark the column, "Does Not Apply".

| | | Average | | +2 Strongly Agree | | +1 Agree | | 0 Neither Agree Nor Disagree | | -1 Disagree | | -2 Strongly Disagree | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | LC | Agg | LC | Agg | LC | Agg | LC | Agg | LC | Agg | LC | Agg |
| 11. | A computer search by title is difficult | -1.01 | -1.0 | 4 | 3 | 10 | 10 | 12 | 13 | 37 | 42 | 36 | 33 |
| 12. | A computer search by author is easy | +1.15 | +1.06 | 37 | 33 | 46 | 48 | 12 | 10 | 4 | 7 | 2 | 3 |
| 13. | A computer search by subject is difficult | - .58 | - .48 | 7 | 8 | 19 | 23 | 17 | 15 | 36 | 33 | 22 | 21 |
| 14. | A computer search by call number is easy | + .62 | + .73 | 23 | 26 | 33 | 34 | 29 | 25 | 8 | 10 | 7 | 5 |
| 15. | A computer search by combined author-title is difficult | - .82 | - .92 | 5 | 3 | 8 | 9 | 22 | 19 | 36 | 36 | 29 | 32 |
| 16. | Remembering commands in the middle of the search is easy | + .39 | + .68 | 12 | 17 | 38 | 44 | 19 | 18 | 26 | 17 | 4 | 4 |
| 17. | Finding the correct subject term is difficult | -.29 | + .09 | 8 | 11 | 26 | 32 | 19 | 20 | 35 | 29 | 12 | 8 |
| 18. | Scanning through a long display (forward or backward) is easy | + .08 | + .45 | 9 | 12 | 35 | 41 | 18 | 19 | 31 | 22 | 8 | 6 |
| 19. | Increasing the result when too little is retrieved is difficult | + .17 | + .31 | 7 | 9 | 36 | 38 | 28 | 28 | 24 | 20 | 5 | 6 |
| 20. | Reducing the result when too much is retrieved is easy | + .18 | + .25 | 8 | 9 | 34 | 33 | 29 | 31 | 24 | 21 | 5 | 6 |
| 21. | Understanding explanations on the screen is difficult | - .66 | - .92 | 5 | 3 | 18 | 11 | 13 | 11 | 45 | 50 | 18 | 25 |
| 22. | Using codes or abbreviations for searching is easy | + .70 | + .69 | 15 | 15 | 53 | 48 | 15 | 19 | 15 | 14 | 3 | 3 |
| 23. | Abbreviations on the screen are easy to understand | + .56 | + .70 | 11 | 14 | 49 | 51 | 17 | 17 | 17 | 14 | 5 | 3 |





BEST COPY AVAILABLE

| | Average | | +2 Strongly Agree | | +1 Agree | | 0 Neither Agree Nor Disagree | | -1 Disagree | | -2 Strongly Disagree | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LC | Agg | LC | Agg | LC | Agg | LC | Agg | LC | Agg | LC | Agg |
| 24. Locating call numbers on the screen is difficult | - .81 | -.91 | 3 | 3 | 12 | 11 | 17 | 13 | 45 | 48 | 23 | 26 |
| 25. Searching with a short form of a name or a word (truncation) is easy | + .33 | +.25 | 7 | 10 | 38 | 34 | 32 | 29 | 18 | 22 | 4 | 6 |
| 26. Using logical terms like AND, OR, NOT is difficult | - .54 | -.45 | 4 | 5 | 12 | 16 | 30 | 29 | 40 | 34 | 14 | 16 |
| 27. Remembering the exact sequence or order of commands is easy | + .46 | +.60 | 8 | 11 | 46 | 49 | 19 | 20 | 24 | 17 | 3 | 2 |
| 28. Understanding the initial instructions on the screen is difficult | - .58 | -.83 | 4 | 3 | 17 | 12 | 18 | 12 | 50 | 51 | 11 | 22 |
| 29. Understanding the display for a single book, journal or magazine is easy | +1.03 | +.95 | 24 | 20 | 59 | 59 | 9 | 11 | 7 | 8 | 2 | 2 |
| 30. Understanding the display that shows more than a single book, journal or magazine is difficult | - .95 | -.85 | 1 | 2 | 8 | 9 | 12 | 15 | 56 | 54 | 23 | 19 |
| 31. Interrupting or stopping the display of information is easy | + .54 | +.49 | 9 | 13 | 48 | 43 | 18 | 19 | 20 | 19 | 4 | 6 |
| 32. Typing in exact spelling, initials, spaces and hyphens is difficult to do | - .81 | -.68 | 3 | 4 | 12 | 18 | 14 | 15 | 55 | 45 | 17 | 18 |
| 33. Knowing what is included in the computer catalog is easy to remember | - .16 | -.01 | 5 | 6 | 28 | 29 | 23 | 28 | 36 | 30 | 7 | 7 |
| 34. The order in which items are displayed is easy to understand | + .71 | +.79 | 11 | 13 | 59 | 58 | 17 | 17 | 10 | 10 | 4 | 3 |
| 35. Displayed messages are too long | - .85 | -.75 | 1 | 2 | 4 | 8 | 22 | 23 | 58 | 54 | 15 | 15 |





BEST COPY AVAILABLE

| | Average | | +2 Strongly Agree | | +1 Agree | | 0 Neither Agree Nor Disagree | | -1 Disagree | | -2 Strongly Disagree | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LC | Agg | LC | Agg | LC | Agg | LC | Agg | LC | Agg | LC | Agg |
| 36. Selecting from a list of choices takes too much time | - .59 | -.58 | 3 | 4 | 14 | 16 | 22 | 21 | 51 | 49 | 10 | 10 |
| 37. Entering commands when I want to during the search process is difficult | - .57 | -.39 | 4 | 5 | 20 | 23 | 18 | 21 | 50 | 41 | 9 | 10 |
| 38. The rate at which the computer responds is too slow | + .02 | -.43 | 12 | 10 | 28 | 20 | 19 | 17 | 33 | 41 | 8 | 13 |
| 39. The availability of signs and brochures is adequate | + .67 | +.58 | 9 | 10 | 59 | 52 | 12 | 16 | 16 | 16 | 4 | 6 |
| 40. Signs and brochures are not very useful | - .80 | -.79 | 4 | 4 | 11 | 10 | 16 | 19 | 51 | 48 | 19 | 19 |
| 41. The staff advice is often not helpful | -1.31 | -.93 | 2 | 3 | 4 | 7 | 10 | 20 | 38 | 41 | 46 | 28 |
| 42. It is hard to find a free terminal | - .61 | -.45 | 4 | 9 | 13 | 19 | 21 | 19 | 49 | 41 | 13 | 12 |

# Council on Library Resources

# COMPUTER CATALOG STUDY

## Questionnaire

**PART 1: WHAT YOU THINK ABOUT THE COMPUTER CATALOG**

**INSTRUCTIONS:** Please mark the response that best describes how you view a computer catalog.

1. I have not used the computer catalog up to now because:
(Mark ALL that apply)

| | | LC | Agg |
|---|---|---|---|
| a | I do not like to use computers | 5.8 | 8.7 |
| b | I did not know there was a computer catalog | 37.6 | 30.0 |
| c | I do not know where it is | 24.1 | 18.3 |
| d | I have not had time to learn to use it | 35.6 | 41.0 |
| e | I have not taken training sessions on how to use it | 38.0 | 44.7 |
| f | There has not been any staff at the terminals to assist me in using it | 3.7 | 8.0 |
| g | The terminals were all in use when I wanted to use it | 2.4 | 3.4 |
| h | I have not needed to use any library catalog recently | 22.4 | 39.8 |
| i | The card catalog is easier to use | 9.8 | 15.7 |
| j | The card catalog contains more of the information I need | 4.7 | 4.3 |
| k | I am a visitor or infrequent user of this library | 51.9 | 28.5 |

2. How much time do you think it takes to learn to use the computer catalog?

| | | LC | Agg |
|---|---|---|---|
| a | A day or more | 3.4 | 3.8 |
| b | Between 1 2 of a day and a day | 9.0 | 4.0 |
| c | Between an hour and 1 2 of a day | 10.0 | 8.0 |
| d | Between 30 minutes and an hour | 20.0 | 20.4 |
| e | Between 15 minutes and 30 minutes | 24.8 | 25.9 |
| f | 15 minutes or less | 32.8 | 37.8 |

3. How difficult or easy do you think it would be to learn to use the computer catalog?

| | | LC | Agg |
|---|---|---|---|
| a | Very difficult | 0.7 | 1.5 |
| b | Somewhat difficult | 12.6 | 16.0 |
| c | Somewhat easy | 52.9 | 46.2 |
| d | Very easy | 33.8 | 36.2 |



BEST COPY AVAILABLE

4. My overall or general attitude toward the computer catalog is:

| | | LC | Agg |
|---|---|---|---|
| a. Very favorable | O | 60.6 | 45.9 |
| b Somewhat favorable | O | 32.6 | 43.3 |
| c. Somewhat unfavorable | O | 4.7 | 8.4 |
| d Very unfavorable | O | 2.2 | 2.5 |

5. How likely are you to use the computer catalog in the future?

| | | LC | Agg |
|---|---|---|---|
| a Very likely | O | 41.3 | 34.0 |
| b Somewhat likely | O | 37.2 | 40.7 |
| c Somewhat unlikely | O | 13.7 | 16.3 |
| d Very unlikely | O | 7.8 | 9.1 |

6. Compared to the card, book, or microfiche catalog in this library the computer catalog is: (Mark ONE only)

| | | LC | Agg |
|---|---|---|---|
| a. Better | O | 35.5 | 33.8 |
| b About the same | O | 5.6 | 16.1 |
| c. Worse | O | 2.8 | 3.9 |
| d Can't decide | O | 56.2 | 46.2 |

## PART 2: ABOUT YOURSELF

INSTRUCTIONS: Your responses are confidential. Please do not write your name anywhere on this questionnaire.

7. I come to this library:

| | | LC | Agg |
|---|---|---|---|
| a Daily | O | 6.1 | 26.5 |
| b. Weekly | O | 12.9 | 32.4 |
| c. Monthly | O | 14.9 | 16.9 |
| d About four times a year | O | 15.6 | 10.9 |
| e About once a year | O | 15.9 | 3.9 |
| f Not before today | O | 34.6 | 9.3 |

8. I use this library's book, card or microfilm catalog:

| | | LC | Agg |
|---|---|---|---|
| a Every visit | O | 25.3 | 9.7 |
| b. Almost every visit | O | 12.6 | 15.2 |
| c Occasionally | O | 12.3 | 31.5 |
| d Rarely | O | 8.5 | 25.3 |
| e Not before today | O | 41.3 | 18.3 |


BEST COPY AVAILABLE

9. I use a computer system other than the library's computer catalog:

| | | LC | Agg |
|---|---|---|---|
| a | Daily | 7.6 | 8.4 |
| b | Weekly | 10.3 | 12.7 |
| c | Monthly | 12.7 | 10.5 |
| d | About four times a year | 9.6 | 9.1 |
| e | About once a year | 8.6 | 8.9 |
| f | Never | 51.2 | 50.4 |

10. My age group is:

| | | LC | Agg |
|---|---|---|---|
| a | 14 and under | 0.3 | 0.5 |
| b | 15 - 19 years | 7.4 | 17.5 |
| c | 20 - 24 years | 30.6 | 40.3 |
| d | 25 - 34 years | 28.3 | 22.5 |
| e | 35 - 44 years | 16.5 | 8.8 |
| f | 45 - 54 years | 6.1 | 4.7 |
| g | 55 - 64 years | 7.4 | 3.2 |
| h | 65 and over | 3.4 | 2.5 |

11. I am:

| | | LC | Agg |
|---|---|---|---|
| a | Female | 47.3 | 47.9 |
| b | Male | 52.7 | 52.1 |

12. Mark your current or highest educational level: (Mark ONE only)

| | | LC | Agg |
|---|---|---|---|
| a | Grade School or Elementary School | 0.3 | 0.7 |
| b | High School or Secondary School | 7.8 | 8.1 |
| c | Some College or University | 29.2 | 53.4 |
| d | College or University Graduate | 62.7 | 37.8 |

BEST COPY AVAILABLE

## PART 3: IMPROVING THE COMPUTER CATALOG

INSTRUCTIONS: Select the response or responses that best reflect your views about changes that should be made in the computer catalog.

43. When I use the computer catalog terminal: (Mark YES or NO)

| | YES | NO | % marking yes LC | % marking yes Agg |
|---|---|---|---|---|
| a The keyboard is confusing to use | O | O | 12.8 | 10.7 |
| b There is too much glare on the screen | O | O | 10.1 | 7.6 |
| c The letters and numbers are easy to read | O | O | 90.9 | 87.9 |
| d The lighting around the terminal is too bright | O | O | 7.5 | 7.8 |
| e There is enough writing space at the terminal | O | O | 53.9 | 63.9 |
| f Nearby noise is distracting | O | O | 9.2 | 11.0 |
| g The terminal table is too high or too low | O | O | 5.0 | 8.2 |
| h The printer is easy to use | O | O | 89.8 | 72.0 |

44. Select up to FOUR additional features you would like this computer catalog to have:

| | | LC | Agg |
|---|---|---|---|
| a Providing step by step instructions | O | 29.5 | 23.6 |
| b Searching by any word or words in a title | O | 16.6 | 17.7 |
| c Searching by any word or words in a subject heading | O | 25.8 | 24.3 |
| d Limiting search results by date of publication | O | 19.8 | 11.2 |
| e Limiting search results by language | O | 13.1 | 9.3 |
| f Ability to search by journal title abbreviations | O | 15.0 | 19.5 |
| g Ability to change the order in which items are displayed | O | 12.3 | 11.5 |
| h Ability to view a list of words related to my search words | O | 41.2 | 44.5 |
| i Ability to search for illustrations and bibliographies | O | 17.9 | 17.4 |
| j Ability to search by call number | O | 8.9 | 8.4 |
| k Ability to print search results | O | 10.4 | 24.9 |
| l Ability to search a book's table of contents, summary or index | O | 45.7 | 41.9 |
| m Ability to know if a book is checked out | O | 43.5 | 26.3 |
| n Ability to tell where a book is located in the library | O | 28.5 | 15.1 |
| o None | O | 3.1 | 4.8 |

45. Select up to FOUR computer catalog service improvements you would like the library to make:

| | | LC | Agg |
|---|---|---|---|
| a More terminals | O | 50.6 | 50.8 |
| b Terminals at locations other than near the card catalog | O | 27.4 | 31.4 |
| c Terminals at places other than library buildings | O | 30.8 | 34.9 |
| d A chart of commands posted at the terminal | O | 28.2 | 29.1 |
| e A manual or brochure at the terminal | O | 16.3 | 20.1 |
| f An instruction manual for purchase | O | 17.8 | 8.4 |
| g Training sessions | O | 26.2 | 13.8 |
| h Slide tape cassette training program | O | 15.3 | 11.1 |
| i None | O | 15.9 | 16.0 |



BEST COPY AVAILABLE

46. Select up to FOUR kinds of material you would like to see added to the computer catalog:

| | | LC | Agg |
|---|---|---|---|
| a Dissertations | ○ | 44.2 | 21.0 |
| b Motion picture films | ○ | 16.2 | 14.3 |
| c Government publications | ○ | 29.7 | 28.3 |
| d Journal or magazine titles | ○ | 43.4 | 22.8 |
| e Maps | ○ | 9.0 | 14.1 |
| f Manuscripts | ○ | 13.5 | 8.5 |
| g Music scores | ○ | 4.7 | 7.8 |
| h Newspapers | ○ | 37.4 | 29.5 |
| i Phonograph records or tapes | ○ | 7.1 | 20.4 |
| j Technical reports | ○ | 20.5 | 18.0 |
| k More of the library's older books | ○ | 38.5 | 25.6 |
| l None | ○ | 6.8 | 11.0 |
| m Other | ○ | 4.1 | 3.8 |

## PART 4: ABOUT YOURSELF

INSTRUCTIONS: Your responses are confidential. Please do not write your name anywhere on this questionnaire.

48. I come to this library:

| | | LC | Agg |
|---|---|---|---|
| a Daily | ○ | 10.9 | 25.8 |
| b Weekly | ○ | 27.4 | 42.4 |
| c Monthly | ○ | 22.2 | 18.4 |
| d About four times a year | ○ | 16.7 | 7.4 |
| e About once a year | ○ | 7.3 | 1.7 |
| f Not before today | ○ | 15.5 | 4.3 |

49. I use this computer catalog:

| | | LC | Agg |
|---|---|---|---|
| a Every library visit | ○ | 27.4 | 21.1 |
| b Almost every visit | ○ | 30.8 | 36.9 |
| c Occasionally | ○ | 13.7 | 26.8 |
| d Rarely | ○ | 5.0 | 5.5 |
| e Not before today | ○ | 23.1 | 9.8 |

50. I use this library's book, card or microfilm catalog

| | | LC | Agg |
|---|---|---|---|
| a Every visit | ○ | 25.5 | 12.4 |
| b Almost every visit | ○ | 24.4 | 21.2 |
| c Occasionally | ○ | 20.8 | 34.4 |
| d Rarely | ○ | 14.5 | 21.3 |
| e Never | ○ | 14.9 | 10.7 |



BEST COPY AVAILABLE

51. I use a computer system other than the library's computer catalog:

| | | LC | Agg |
|---|---|---|---|
| a Daily | O | 12.6 | 13.0 |
| b Weekly | O | 15.6 | 16.7 |
| c Monthly | O | 12.1 | 13.0 |
| d About four times a year | O | 13.8 | 11.9 |
| e About once a year | O | 9.7 | 9.1 |
| f Never | O | 36.2 | 36.3 |

52. I first heard about this computer catalog from: (Mark ONE only)

| | | LC | Agg |
|---|---|---|---|
| a Noticing a terminal in the library | O | 47.3 | 63.6 |
| b Library tour, orientation or demonstration | O | 6.6 | 10.2 |
| c An article or written announcement | O | 2.2 | 3.7 |
| d A course instructor | O | 4.6 | 4.2 |
| e A friend or family member | O | 22.1 | 9.3 |
| f Library staff | O | 17.1 | 9.0 |

53. I learned how to use this computer catalog: (Mark ALL that apply)

| | | LC | Agg |
|---|---|---|---|
| a From a friend or someone at a nearby terminal | O | 13.7 | 15.5 |
| b Using printed instructions | O | 70.7 | 53.3 |
| c Using instructions on the terminal screen | O | 22.1 | 29.0 |
| d From the library staff | O | 53.0 | 29.6 |
| e From a library course or orientation | O | 3.6 | 6.2 |
| f From a slide tape cassette program | O | 0.2 | 0.2 |
| g By myself without any help | O | 11.8 | 19.8 |

54. My age group is:

| | | LC | Agg |
|---|---|---|---|
| a 14 and under | O | 0.6 | 1.8 |
| b 15 19 years | O | 6.8 | 19.6 |
| c 20 24 years | O | 32.4 | 37.8 |
| d 25 34 years | O | 38.8 | 26.6 |
| e 35 44 years | O | 14.4 | 9.1 |
| f 45 54 years | O | 4.2 | 3.0 |
| g 55 64 years | O | 2.0 | 1.3 |
| h 65 and over | O | 0.8 | 0.8 |

55. I am.

| | | LC | Agg |
|---|---|---|---|
| a Female | O | 35.2 | 40.1 |
| b Male | O | 64.8 | 59.9 |

56. Mark your current or highest educational level: (Mark ONE only)

| | | LC | Agg |
|---|---|---|---|
| a Grade School or Elementary School | O | 0.4 | 1.0 |
| b High School or Secondary School | O | 4.2 | 9.0 |
| c Some College or University | O | 22.6 | 46.2 |
| d College or University Graduate | O | 72.8 | 43.8 |



BEST COPY AVAILABLE